L. 55 NO. 6

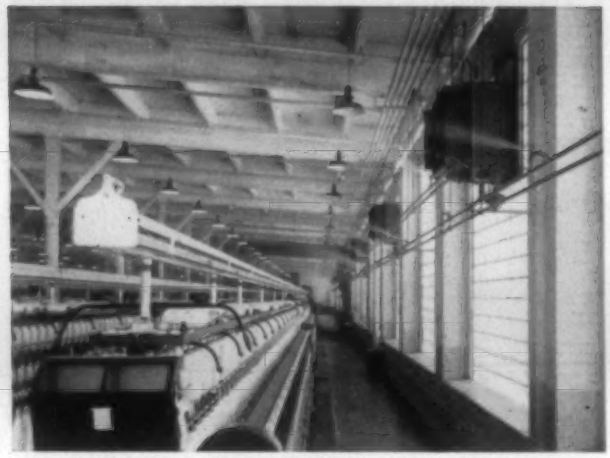
Why Modernize Spinning?
(Page 51)

textile bulletin

JUNE • 1959

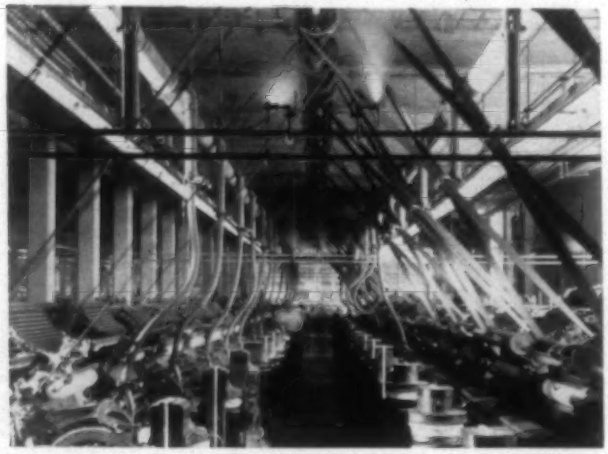
Sectional INDEX

BULLETIN is published by Clark Publishing West Morehead St., N.C. Subscription year in advance, $2 years. Entered as class mail matter 1911, at Postoffice, N. C., under Act Congress, March 2, 1897.

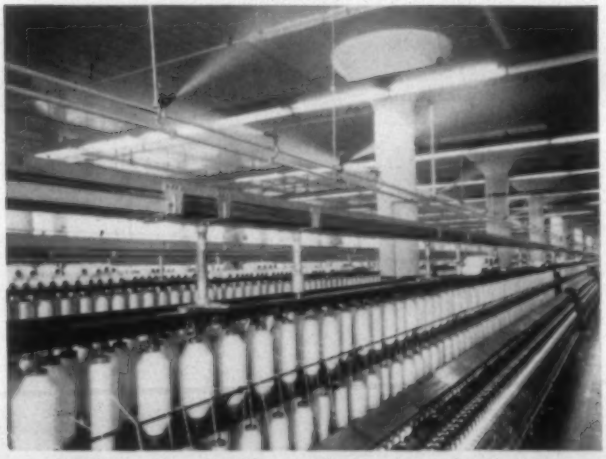


WILLIMANTIC, CONN. — Humidification with cooling was the choice in this mill.

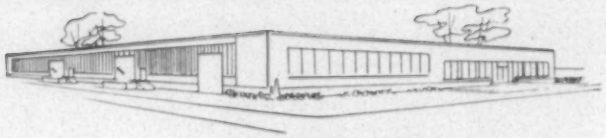
DALTON, GA. — Amco Humidification with cooling was preferred for spinning operation at Dalton, too.



NEWNAN, GA. — Amco Humidification alone was selected for carding room at Newnan.



CLOVER, S. C. — Humidification alone is also used in the spinning room here.



Cleveland-Rowan Plant of American Moistening Company. This modern plant is located at Cleveland, N. C. for the fabrication of duct work and sheet metal products.

a leading All-American team...

AMERICAN MOISTENING COMPANY

and

AMERICAN THREAD COMPANY

A 65-year old association which has resulted in great gains in product quality and productivity

Correct yarn regain through maintenance of normal moisture content is only one of the benefits which American Thread has enjoyed as a result of the use of Amco humidification. Among the others are yarn numbers kept more even; increased output due to closer machine tolerances and less static electricity; improved product quality because of fewer thread imperfections, reduced dust and fly, more operator comfort.

Amco, of course, designs *all* types of systems — straight humidification; humidification in combination with ductless evaporative cooling, as used by American Thread; dry duct systems; and central station air conditioning.

For expert advice, backed by many years of textile air conditioning experience, call on Amco. An Amco engineer will be glad to suggest a solution to any air conditioning problem you may have. There is absolutely no obligation.

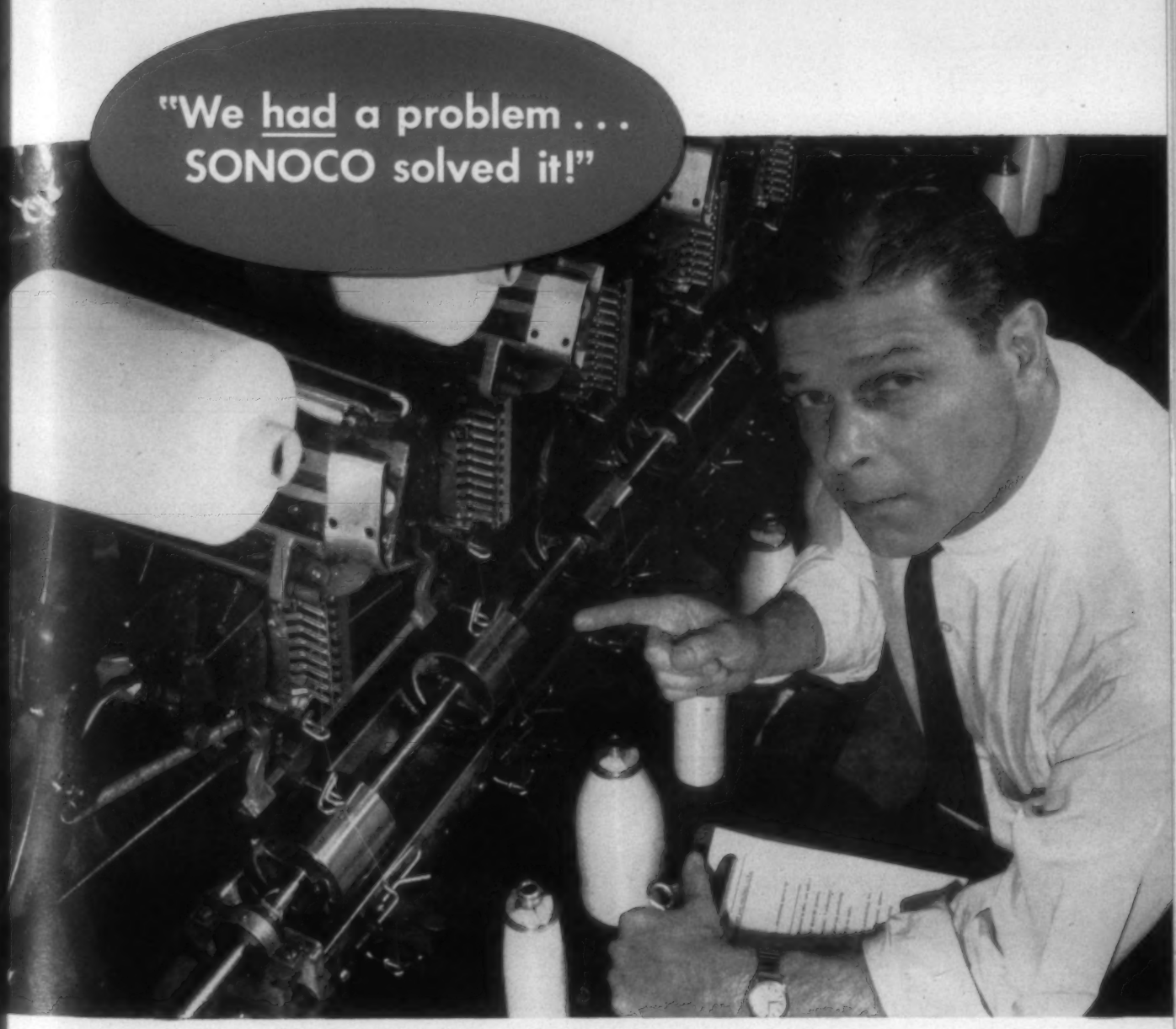
AMCO

SINCE 1888

AIR CONDITIONING EQUIPMENT

AMERICAN MOISTENING COMPANY • CLEVELAND, NORTH CAROLINA

BRANCHES: ATLANTA, GA. • PROVIDENCE, R. I. • TORONTO, CANADA



THE NEED: Cones to resist oil absorption

Yarn lying next to the cone surface was found to be brittle and stiff and hard to work. This condition was caused by the cone absorbing oil from the yarn. The solution to the problem required cones with a suitable oil barrier surface.

Through research and experimentation Sonoco found that cones with special Unitex surfaces eliminated the oil absorption. An oil extraction, from yarn aged on cones of this type, showed no deficiency of oil in the yarn lying next to the cone surface — and at 1000 yards per minute, the yarn showed no tendency to slough off.

Only Sonoco with 60 years' experience, plus modern research and completely integrated manufacturing facilities, could solve this problem quickly with economical and efficient carriers. It is typical of countless cases where Sonoco technical and production "know-how" has benefited the industry. You can continue to depend on Sonoco!

sonoco
PAPER PRODUCTS

Our 60th year
1899 - 1959

SONOCO

Products for Textiles

SONOCO PRODUCTS COMPANY

Main Office—Hartsville, S. C. • Mystic, Conn. • Akron, Ind. • Lowell, Mass. • Phillipsburg, N. J. • Longview, Texas • Philadelphia, Pa. • La Puente, Cal. • Atlanta, Ga. • Granby, Quebec • Brantford, Ontario • Mexico, D. F.

Mill after mill says, "It's amazing!" Dayton's

Golden Thorobred Drop Box Picker

Lasts at least ten times longer... cushions the entire picking action

It all adds up to really tremendous savings in the cost of picker replacement and a new level of production efficiency with a product that's being manufactured right here in the United States.

And, how's this for a perfect balance of toughness and resiliency? The Golden Thorobred Drop Box Picker won't abrade the picker stick . . . yet resists wear to itself by up to 10 times longer. At the same time, the Golden Thorobred cushions the impact of the shuttle . . . protecting it against undue wear.

As an added feature, Dayton equips the Golden Thorobred with extra long-wearing Daylube Bushings which can be economically replaced again and again to extend the life of the picker substantially.

The secret of this long-wearing performance and easy-cushioning action is a new material created out of more than 6 years of Dayton research in advanced elastomers. Now, at last, you can buy a perfectly uniform, perfectly constant, drop box picker that never varies in size or performance. Each fits the picker stick in exactly the same way, to save you time and trouble.

Dayton Golden Thorobred Drop Box Pickers are available now through your local Dayton jobber. Call him now or write The Dayton Rubber Company, Textile Division, 401 South Carolina National Bank Building, Greenville, S. C.

Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

OVERSEAS PLANT, THE DAYTON RUBBER CO. LTD., DUNDEE, SCOTLAND

CLINTON
can do it with CORN

destination?

a candy bar or a wonder drug

Clinton Products go into the making of many good things. Yours?

It has been said, "Wherever you may be and whatever you touch, one or more products of corn enter into its manufacture." The fabric from which your shirt is made was woven with the aid of starch. Starch gave it the fine finish at the laundry. The cigarette you smoke, the magazine you read, the food you eat, the beverage you drink—yes, the candy with which you treat your youngster or the antibiotic in your doctor's prescription depended in some way on a product that was made from corn.

Corn is our business at Clinton. In our modern plant we produce the finest of products from corn—under the strictest system of quality control. And, Clinton research *today* improves *tomorrow's* product for you.

Clinton Serves the TEXTILE Industry

Clinton's uniformly controlled, quality products will meet your textile manufacturing requirements. Consult your Clinton salesman. He will provide product information, arrange for prompt technical service, or assist you in any way possible.

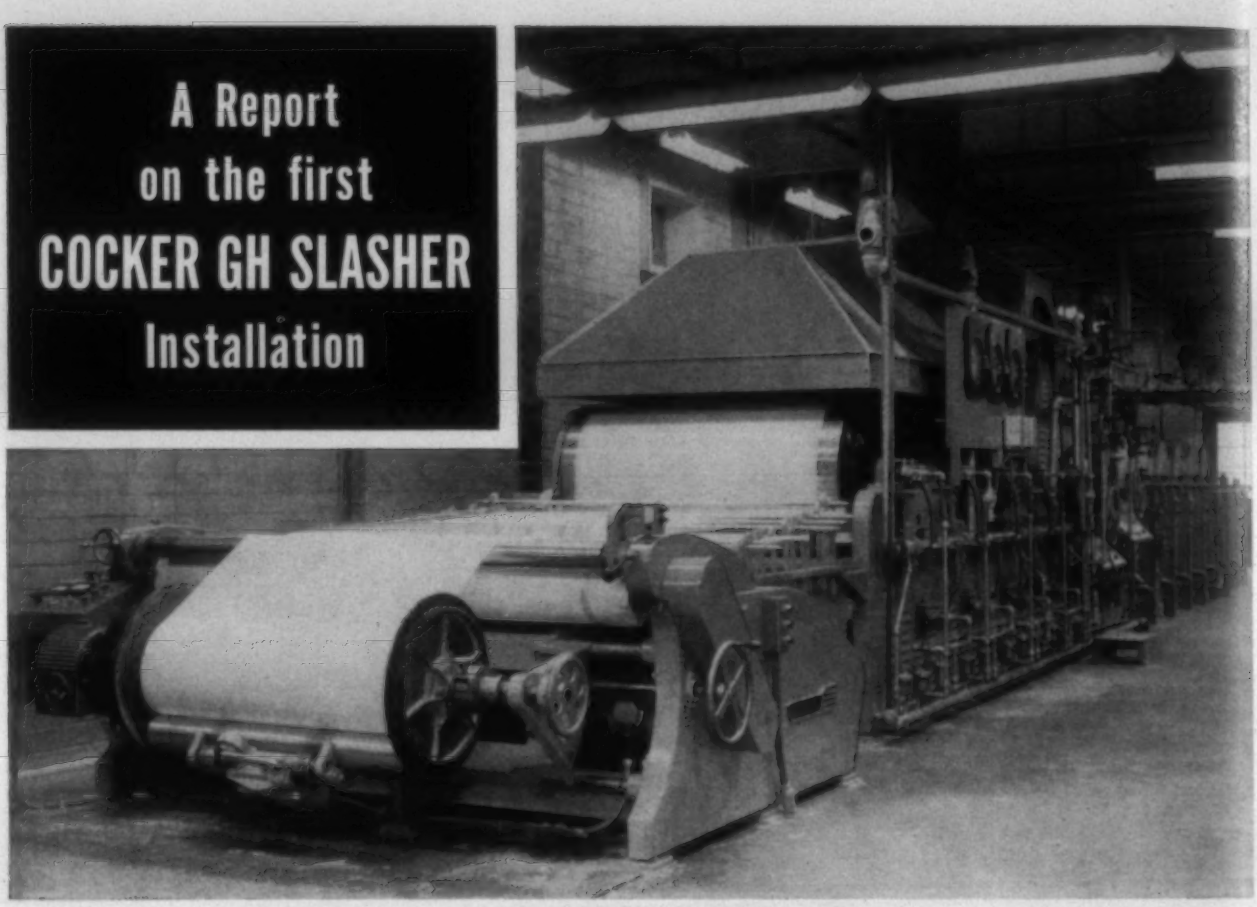
CLINTON CORN PROCESSING COMPANY
CLINTON, IOWA

CORN SYRUPS
DEXTROSE • STARCHES • DEXTRINS
SUGARS • OILS • LACTIC ACID
AND OTHER PRODUCTS FROM CORN

CLINTON

If you can do it with CORN you can do it better with CLINTON

A Report on the first COCKER GH SLASHER Installation



A Complete Cocker GH Slasher Installation at Morgan Mills, Springfield Division, Laurinburg, N. C.

- **1540 pounds per hour** *(combed yarn)*
- **15 percent pick up**
- **40 percent penetration**

This, the first complete Cocker GH Slasher Installation, has fully proven the claims made for it at the Greenville Exhibition.

Operating with 6,400 ends 40s single combed yarns, this GH Slasher has been running at a top speed of 135 yards per minute and a production of 1540 pounds per hour . . . with 4½% moisture regain, 15% size pick up, and 40% penetration. This has resulted in a weave room efficiency of 96% and an increase in loom assignment.

The Model GH is unquestionably the World's most modern, most efficient, and most economical slasher. Write for full information today.

COCKER MACHINE & FOUNDRY COMPANY

IN CANADA:
Contact W. S. Clark
Montreal, Canada
Oxford 7-2242

PLANT & OFFICES
at Ranlo, N. C.
MAILING ADDRESS
Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

for permanent mothproofing

Wool yarn, blankets, rugs, suitings treated with Hartocide are protected against the damaging effects of moths and carpet beetle larva for the *life of the garment.*

The protection, achieved *at very low cost,* is applied directly in the dye bath, and remains through laundering, dry cleaning and all normal use conditions.

Wool articles properly treated with Hartocide exceed ASTM requirements for permanent mothproofing.

Write for an appointment with our Technical Director for a trial run and prove to yourself how economically you can add the *plus* of permanent mothproofing to your goods.

®Registered with U.S. Department of Agriculture.

the Hart Products Corporation

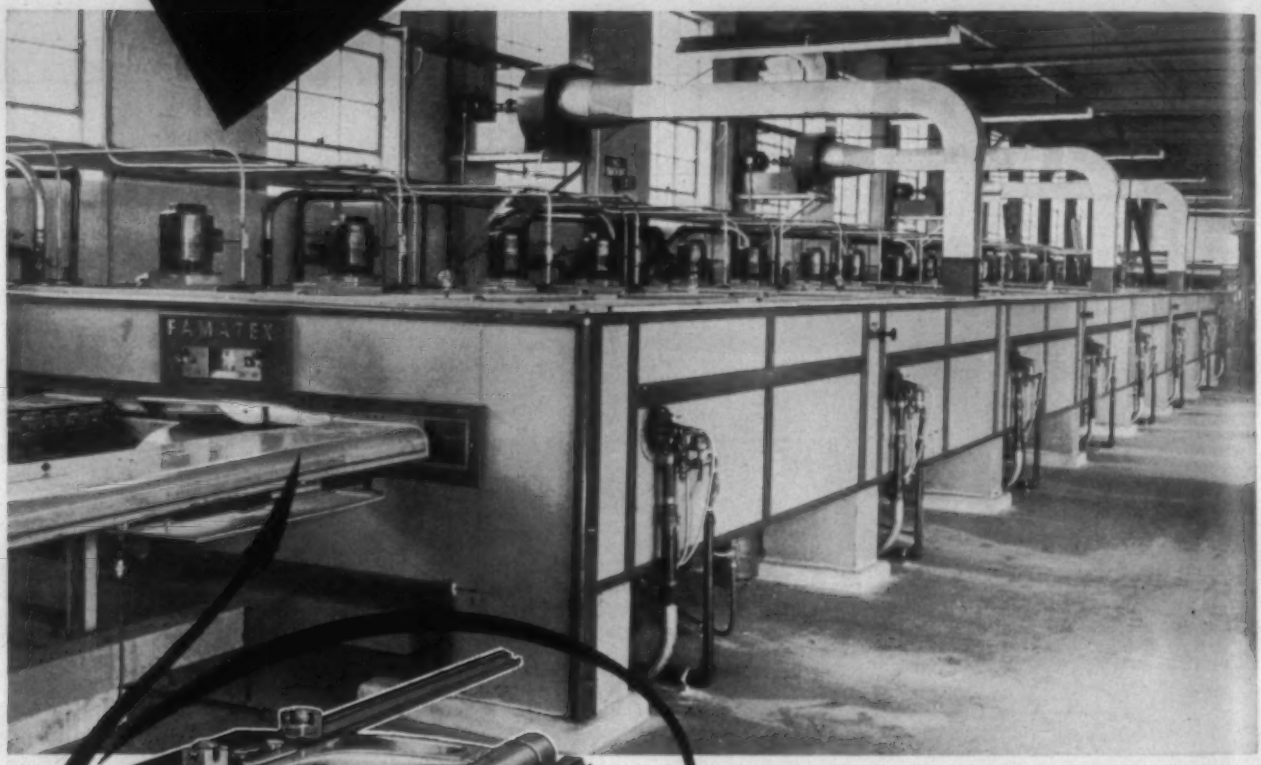
1440 BROADWAY, NEW YORK 18, N. Y.

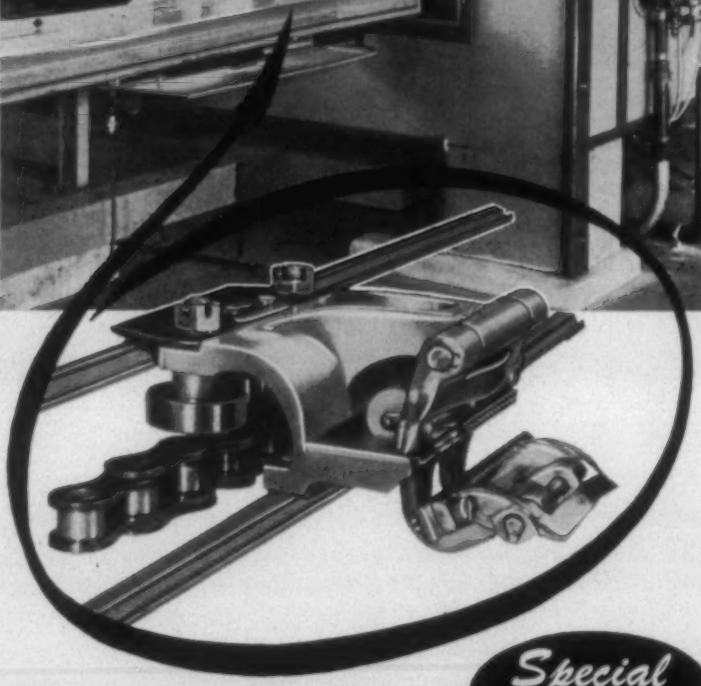
Works and Laboratories, Jersey City, N. J.

Reiner-Famatex TENTER

WITH LATEST GAS HEATING SYSTEM

THE MOST EFFICIENT TENTER FRAME ON THE MARKET TODAY





Special FEATURES

for drying, heat-setting and resin curing all kinds of woven and knitted fabrics.

- Combined pin and clip chain link (Special pin chain link for knitted fabrics).
- Ball Bearings and graphite sliding surfaces eliminate friction and oiling problems.
- Most modern gas heating system provides unusually high drying capacity and a wide range of temperatures (250° F to 450° F) —individually controlled in each chamber.
- Exceptionally uniform jet air flow.
- Efficient over-feeding and weft-shrinking devices.

YOU CAN SEE THIS MACHINE IN ACTUAL MILL OPERATION — phone for appointment—and learn how to get better drying and top quality production.

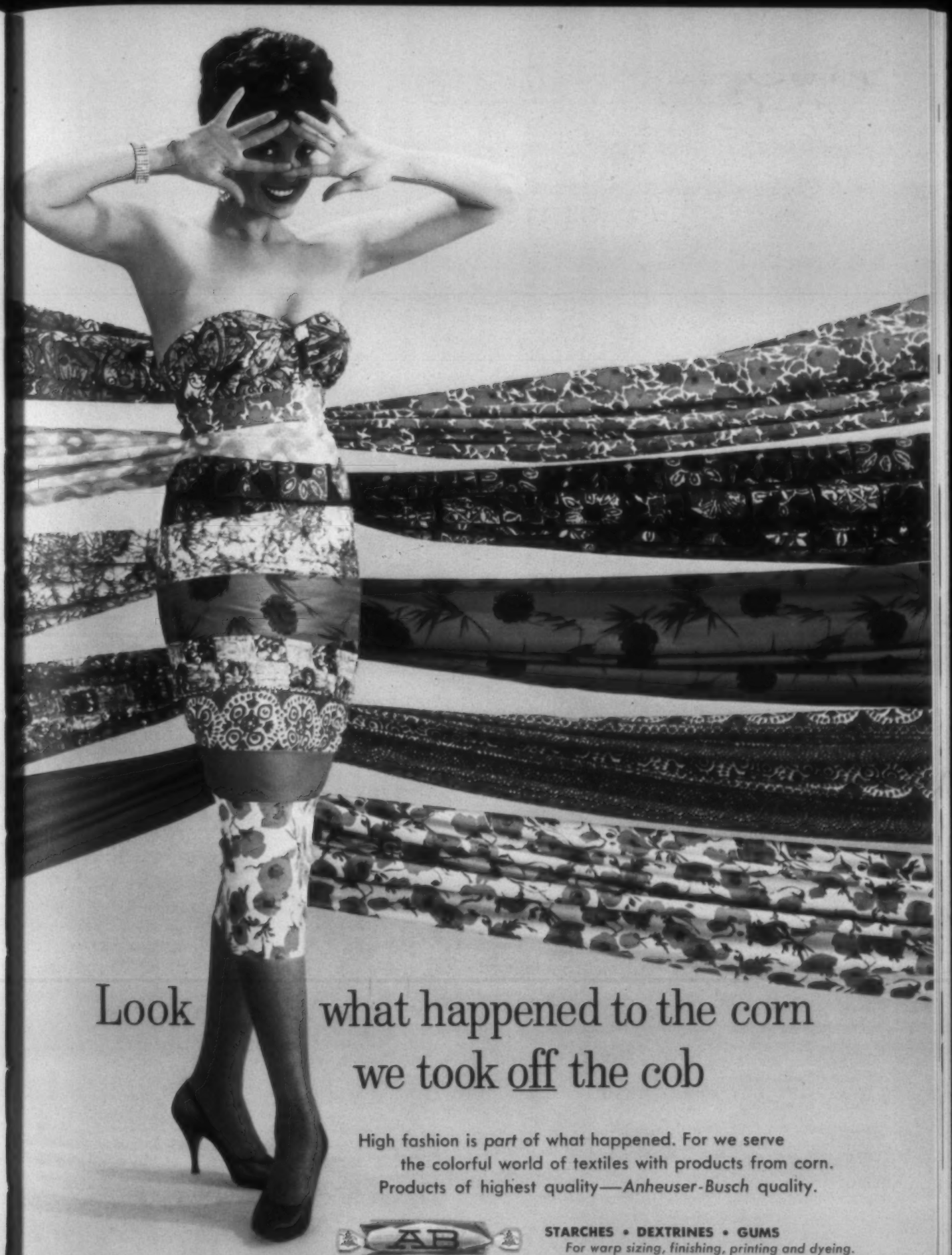
ROBERT REINER, INCORPORATED

Telephone: UNion 7-0502 — From New York City call LOngacre 4-6882

WEEHAWKEN NEW JERSEY

(Only 10 minutes from Times Square by direct bus)

An Honored Name in Textile Machines Since 1903



Look what happened to the corn we took off the cob

High fashion is *part* of what happened. For we serve the colorful world of textiles with products from corn. Products of highest quality—*Anheuser-Busch* quality.

AB

STARCHES • DEXTRINES • GUMS
For warp sizing, finishing, printing and dyeing.

ANHEUSER-BUSCH, INC., Bulk Corn Products Division, St. Louis, Missouri

For The Textile Industry's Use

— NEW MACHINERY, EQUIPMENT AND SUPPLIES —

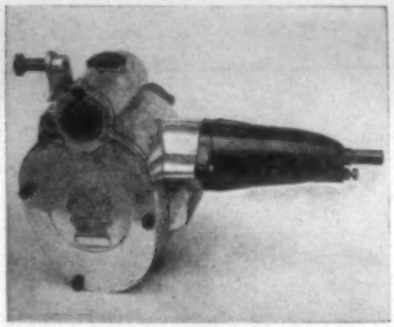
Constant Card

Pneumafil Corp., Charlotte, N. C., has announced its appointment under exclusive license to manufacture and supply to the U. S., and other North American mills, the Constant Card which was designed and developed in Spain. Constant Card is a self-contained suction system. It is said to greatly improve the carding action of the cotton-type card by maintaining a constant fiber load on the cylinder, thus giving a superior and constant carding action between flats and cylinder.

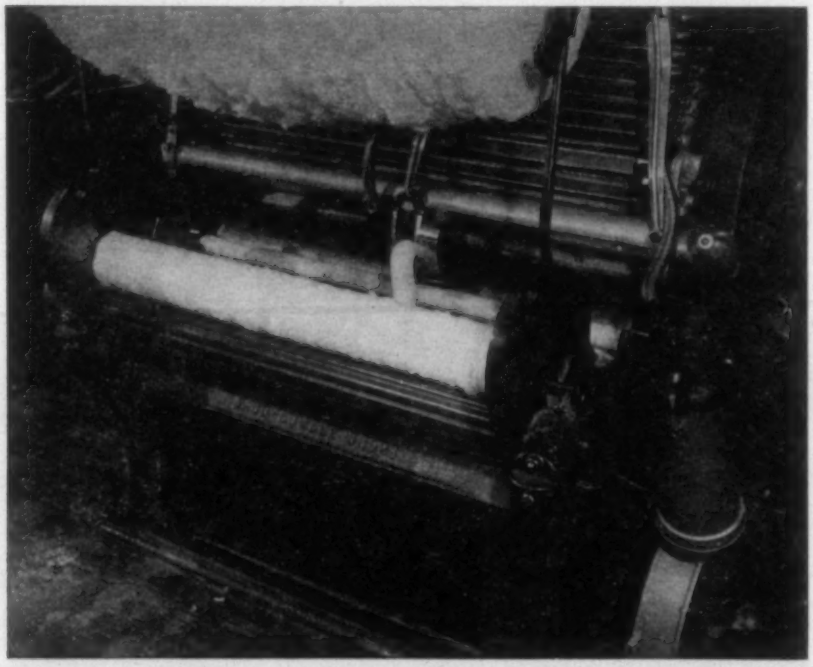
Pneumafil says that the successful use of Constant Card in mills throughout Europe and Asia indicates its destiny to become standard and essential equipment with the American textile industry. There now is a 170-card installation here, and other mills are reported to be conducting tests on smaller installations with excellent results. Stripping cycles are said to be increased up to 120 hours, resulting in phenomenal fiber savings, labor savings, and quality improvements.

A standard unit has been evolved that can be applied to any existing type card, whether old or new. It has an adjustable control system for any kind of production and is said to be efficient with any cotton, synthetic, or blended fiber.

There are three basic components: (1) The vacuum generator mounted on the side of the card, requiring virtually no floor space. The generator is driven from the space cylinder V pulley; (2) The flexible vacuum transmission system designed to permit the use of full-size laps and spaced to accommodate the conventional upper deck lap storage; and (3) The fiber collector which slowly traverses the full width of the cylinder. A specially designed high-pressure vacuum nozzle removes long staple good quality cotton from the top of the cylinder wire, condenses this fiber into sliver form and reintroduces it evenly to the card feed roll. There is no direct contact between nozzle and card clothing, eliminating any possible damage to the card clothing wire. (Request Item No. F-1)

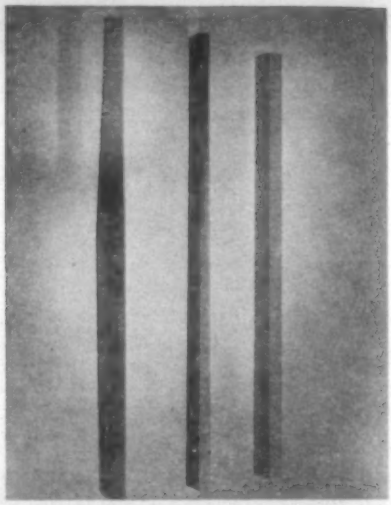


Here is a close-up of the fiber collector part of Pneumafil's Constant Card.



Shown here in operation is the Constant Card by Pneumafil Corp. which collects good quality cotton from the top of the cylinder wire, converts it to sliver and reintroduces it to the card feed roll.

Picker Stick



Shown here in three steps of its manufacture is the new Lundstick picker stick recently introduced by Hardwood Mfg. Co.

Hardwood Mfg. Co., Greenville, S. C., has introduced to the trade a new picker stick of DensiwooD. Called the Lundstick, the picker stick is said to have wearing qualities which far surpass those of an ordinary hickory stick and to retain the necessary whip and resilience. The stick is based on the invention of a process of densification after plasticization. Cellulose and lignin, the major components of normal wood, are combined by nature into a light weight material of surprising strength. Wood can be substantially compressed under the application of heat and pressure to produce a densified improved wood, either with a supplementary binder, or with lignin as the natural binder. Details of the process have not been revealed. The new picker stick has been in use in mills throughout the country for the past two years and is said to be unmatched in its performance.

(Request Item No. F-2)

Opener-Blender-Cleaner

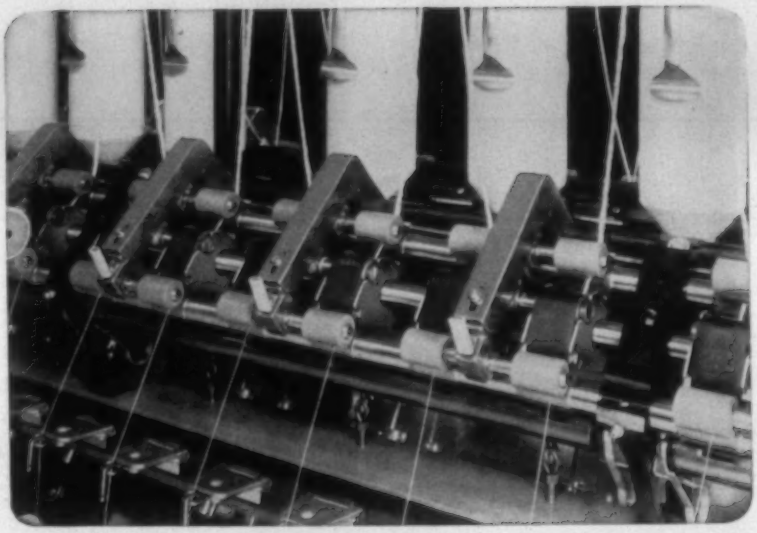
Davidson-Kennedy Co., Atlanta, Ga., has announced a new, improved version of its opener-blender-cleaner. The new machine features completely enclosed design to eliminate fly waste and ready accessibility to individual cylinders and all other internal parts. Mill operators are said to report that it retains all of the advantages of the original D-K machine without any increase in nep count or decrease in break factor of the yarn. Patents are pending on the improvements to the machine.

Sides are constructed of one plate and top and ends are covered completely, en-

THE MOST SENSIBLE ANSWER TO GADGET-FREE TOP ROLL SUSPENSION

ROBERTS *PosiWate* SUSPENSION SYSTEM

PosiWate Ball Bearing Top Roll Suspension eliminates all cap bars and the need for top roll oiling. All three lines of top rolls have double-row ball bearings; heavier weighting can be handled when required. Weight distribution is positive. Hooks, short springs and other gadgets are not used. Roberts Ball Bearing Bottom Rolls with EvenGrip Fluting are also available.

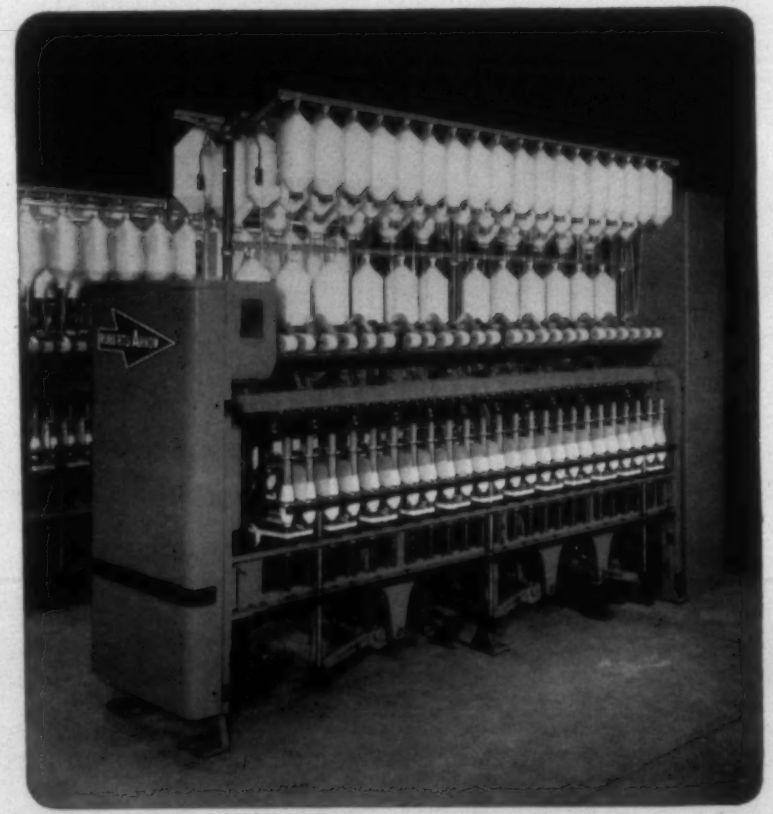


A FEATURE OF

ROBERTS ARROW

MODEL M-1

and changeover modernization for any make of frame



ARROW M-1 SPINNING FRAMES

for cotton and for synthetics
1½ to 3¼ inches long

PosiWate Top Roll Suspension

UnaRing Balloon Control

EvenGrip Fluted Bottom Rolls

Roberts Supreme Ball Bearing Spindles

Double-Apron High Draft System

UnitVac Power-Suction Cleaning

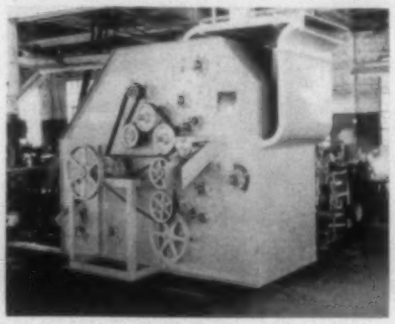
Roberts All-Ball-Bearing Head

Unitized Sectional Frame

AeroCreel with Latch-Type Bobbin Holders

ROBERTS COMPANY

SANFORD, NORTH CAROLINA



This opener-blender-cleaner is an improved version recently introduced by Davidson-Kennedy Co.

closing all working parts. Flange bearings carrying individual rolls are mounted on the face plate so that by removing bolts from the face plate, each individual cylinder may be removed as if it were a plug. A shaft extension is furnished which screws into the end of the shaft going through the fixed bearing side and guides the roll as it is pulled out of the other side of the machine. This means if there is damage to an individual roll or grid bar, it is not necessary to dismantle the entire machine in order to repair one damaged part.

The doffer brush has been redesigned as a cage type fan and acts as its own doffing fan. This eliminates the necessity of proper drafts being supplied by succeeding condensers and makes the machine adaptable to air type cleaning.

The D-K opener-blender-cleaner is said to be unusually rugged in construction. All internal baffling is heavy gauge enamel coated steel welded integrally with the frame giving rigidity which makes for a sturdy smooth running machine.

The cleaning efficiency of the unit is said to run from 30% to 50%, depending on the type of stock—the dirtier the stock, the higher the cleaning efficiency. It has proved efficient in removing pepper waste and removing leaf without pulverizing it to pepper waste. Tests indicate that stock is improved from one-half grade to as much as two grades, depending on the nature of the stock run. The entire character of the stock is changed since spots are blended in and the whole is much brightened.

In most cases, a decrease in over-all waste should be obtained. For an average of all cottons, about 2.5% waste is removed of which 87% is foreign matter and 13% lint. Due to the cleaner and more opened condition of the stock, an increase in spinning efficiency can generally be expected.

(Request Item No. F-3)

Spiked Apron Feeder Magnet

Magni Power Co., Wooster, Ohio, has developed a spiked apron feeder magnet said to eliminate expensive equipment damage and possible fire hazard due to tramp metal in processing lines of wet or dry fibers and to extend card and garnett clothing life from four to five times that of previous limits.

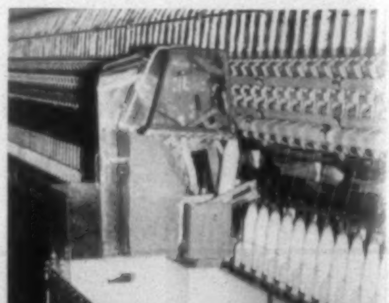
The magnet is mounted on non-magnetic frame featuring all new lightweight riveted and welded construction and is said to be easily installed in virtually any machine. A special protective cover prevents iron accumulation on back of magnet castings and keeps dirt out of the machinery.

Additional features include lift handles that swing back for easy cleaning. Permanent magnetic strength is guaranteed for the mechanical life of the machine on which it is mounted. No maintenance or outside power is required. (Request Item No. F-4)

Automatic Doffer

Edward S. Rudnick, Representatives, New Bedford, Mass., has announced the availability in this country of a new automatic doffing device for use on all types of spinning frames and twisters. Called the Auto-Doffer, it is built by Kanegafuchi Machine Mfg. Co. Ltd. of Osaka, Japan, and is said to be the result of several years of effort. The Auto-Doffer consists basically of separate units which attach to each side of the frame being doffed. Each unit automatically travels from one end of the frame to the other (supported by two guide rails fixed to each side of the frame) at speeds of 17 to 25' per minute.

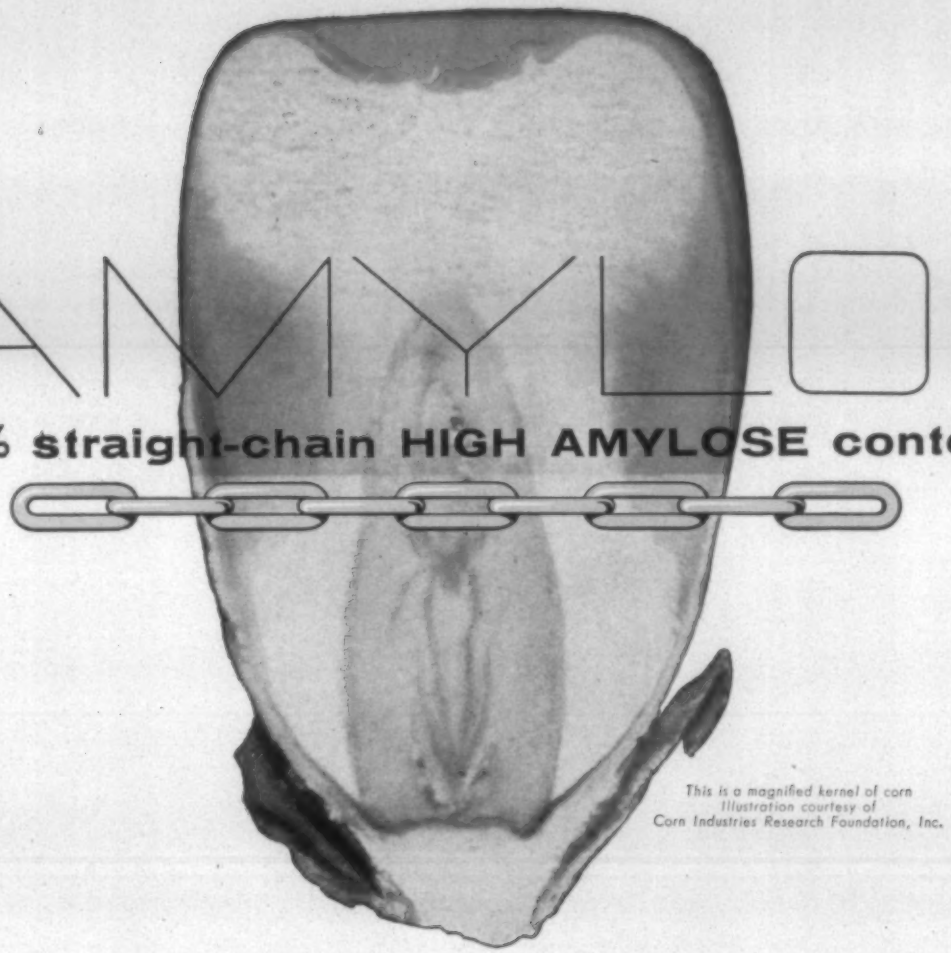
As the unit comes to a bobbin, a guide gently moves the yarn and traveler to the back of the ring. Another guide tilts up the lappet and tread-guide. A "kicker" lever forces the bobbin or spinning tube slightly upward, from its bottom, breaking the contact with the spindle. Simultaneously a swinging arm with specially designed rubber grippers grabs the top surface of this full bobbin. The swinging arm then lifts the bobbin vertically from the spindle and thence over the doffing bar. The yarn between this lifted bobbin and the few coils formed around the spindle enter a slit in another guide to be held and cut off by the cutting knife. The loose tail wraps around a roller which allows for sufficient slack for the empty bobbin to be placed onto the spindle without breaking the yarn. The



Edward S. Rudnick has introduced this Japanese automatic doffer for use on all types of spinning frames and twisters.

AMYLON

55% straight-chain HIGH AMYLOSE content



This is a magnified kernel of corn
Illustration courtesy of
Corn Industries Research Foundation, Inc.

A RADICAL GENETIC CHANGE

science and nature synthesize a new chemical polymer

NOW AVAILABLE in semi-commercial quantities. A radically altered natural starch polymer that contains 50-55% amylose —the straight-chain molecular component of starch.

This is the first major genetic advance leading to a potentially feasible starch containing 100% amylose. It's an exciting genetic achievement. Until now, the amylose content commonly available never exceeded 27%.

Geneticists have worked for many decades to develop special qualities in hybrid corn. Such as high yield, drought and insect resistance. A change in chemical structure was first accomplished industrially by the breeding of corn containing 100% amylopectin which NATIONAL introduced as AMIOCA in 1943. High amylose corn represents another major industrial accomplishment in the new area of plant breeding intended to alter the polymer structure of the starch itself which NATIONAL is introducing as AMYLON®.

Milled from high amylose corn in the same way as ordinary starch, AMYLON represents a marked step towards the unusual properties of amylose itself: Film formations, with greater strength than ordinary starch films. With improved water, grease and oil resistance. Flexibility. Unusually strong gels. Adhesiveness.

To the inquiring mind, these unusual properties suggest a variety of applications: Soluble and digestible packages for instant coffee, meats, vegetables, fish, fruit. Butter. Vegetable shortenings. Soluble packages for soap powders and insecticides. Grease and oil resistant coatings. Water and humidity resistant binders. Improved textile sizes and finishes, etc.

An invitation is extended to all who are interested in exploring the properties of this new high amylose starch.

Address: Amylon Starch Division, National Starch and Chemical Corporation, 750 Third Avenue, New York 17, N. Y.

National
STARCH and CHEMICAL
CORPORATION

grippers on the raised bobbin open, while a spring at the top of the bobbin forces it away from the grippers, down a chute and into the full-bobbin box.

In turn the empty bobbins which have been stacked in a hopper, are individually lifted by a continuous bobbin carrier and aligned and stacked into a guide chamber, where each bobbin is held about a 45° angle by the two holders. As the guide chamber becomes positioned over the empty spindle, the lower holder releases the bobbin to the top of the spindle, while the upper holder guides the empty bobbin to a vertical position to slide down on the spindle. For certain types of friction drive spindles and tubes an auxiliary arm then taps the top of the tube forcing it down to its running position on the spindle. The guide, which has been holding the lappets and threadguides out of the way, releases each one back to its normal position. The entire sequence of operations is said to take about ½ second for each bobbin.

When the doffer unit reaches the other end of the frame, a limit switch on the rail causes it to release its full-bobbin box while the doffing arms are tilted out of the way. A reversing clutch then brings the unit back to its starting position while its power cord winds up onto a special reel.

It is reported that in Japan the Auto-Doffer is successfully doffing 400-spindle frames in less than two minutes. The rate of yarn breakage in doffing is said to average 30% to 50% less than hand doffings. The unit is available in both portable and permanently mounted models.

(Request Item No. F-5)

Granular Card Top

Benjamin Booth Co. of Philadelphia, Pa., and Carolina Machinery Co. of Charlotte, have introduced Gran-O-Top, new granular top for cotton cards, licensed by the United States Department of Agriculture. Laboratory tests conducted at the U.S.D.A. Southern Regional Research Laboratory in New Orleans are said to have indicated that this new carding approach offers substantial reduction in flat costs as well as in production savings through the complete elimination of flat wastes.

The granular card was developed by Dr. August L. Miller in association with R. A. Rusca and R. S. Brown at the U. S. Department of Agriculture, New Orleans Research Laboratory. The granular material used to provide the carding action normally supplied by flats has a special abrasive developed by Minnesota Mining & Manufacturing So., St. Paul, Minn. The granular material is secured to four large aluminum semi-circular sections by a pressure-sensitive adhesive backing. The aluminum sections cover the entire top of a card and are said to provide an excellent seal against dust and grime. The sections are machined to close tolerances and are set for 0.007" clearance above the main cylinder.

Pictured here are the ribbed aluminum sections which form the granular card top now being produced by Benjamin Booth Co.

The granular surface of the card top has a pressure-sensitive backing and is applied to the aluminum sections by rollers.

The granular material, which resembles sandpaper, cannot load with the stock and therefore entirely eliminates stripping and stripping waste. The material is expected to give approximately six months service under 24 hour per day operation. Replacement cost for the granular material is approximately $18 per card and card downtime for recovering is under two hours. Once the aluminum sections have been mounted and accurately set, no further adjustments are required even after granular clothing changes. There are no moving parts.

The combination of this new granular top with the Booth Micr-O-Grind needle point card clothing is said to result in yarn with greatly reduced nep count with longer stripping cycles and much lower stripping waste. Stripping cycles are said to be reduced from once every three hours to once every eight hours with some mills running upwards of 24 hours. Fly is claimed to be eliminated by the completely closed construction. Costs of the new Gran-O-Top are reported to be less than two-thirds of conventional cotton flats.

(Request Item No. F-6)

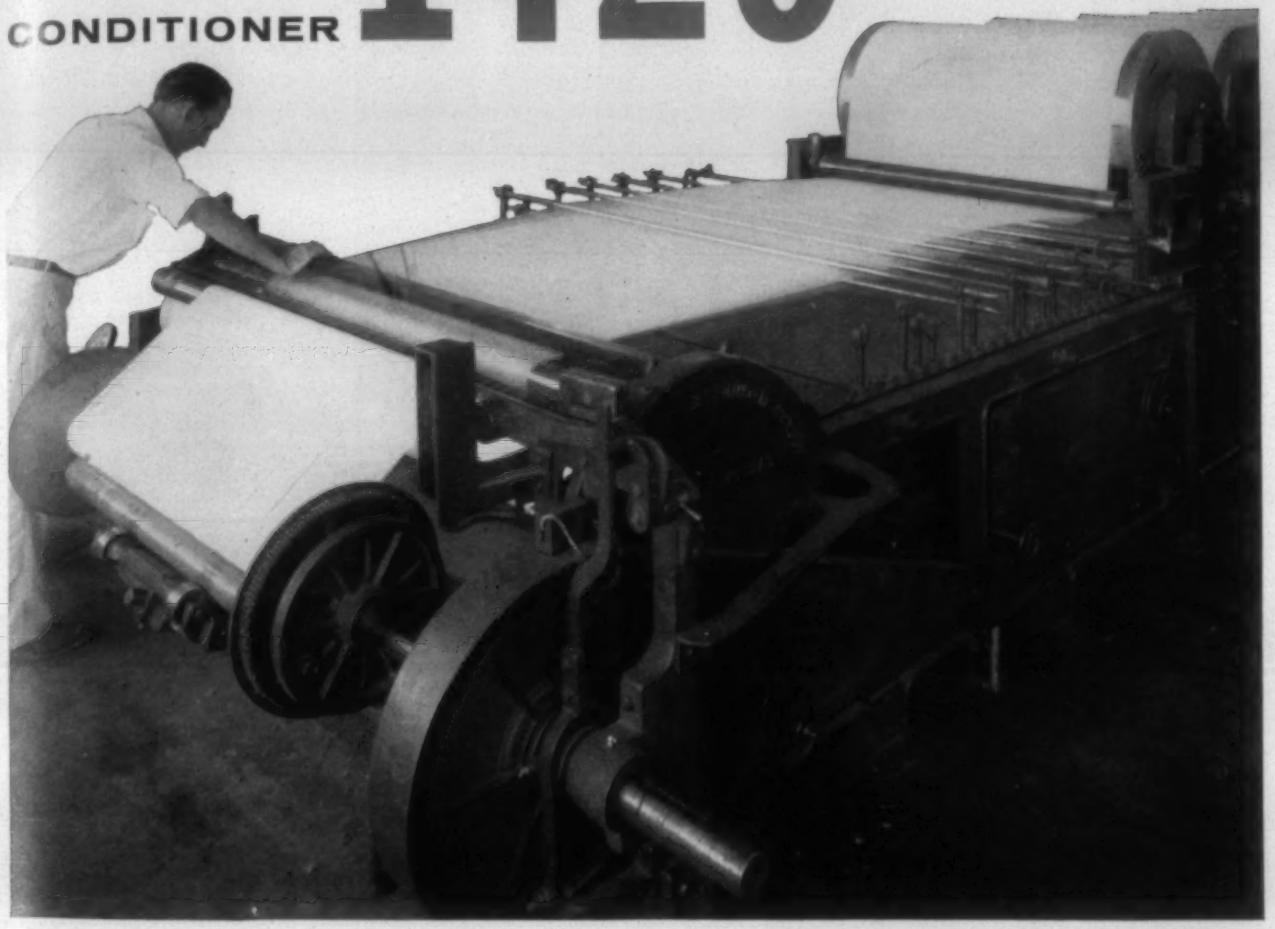
Fork Truck Attachment

A new fork truck carriage extension for use with narrow aisle trucks has been designed by The Raymond Corp., Greene, N. Y. The new carriage accessory is designed for use with the company's Four Directional truck in order to permit long flexible loads to be handled faster and with greater safety. It will simplify the handling of such long springy items as broadloom carpets.

With the new carriage arrangement most of the weight is carried by the main forks with the outer extension forks holding up the ends of the load to prevent dragging or swaying. The stabilizing extension forks are adjustable to a maximum width of 15 feet. The load stabilizer carriage hooks on to the standard fork carriage and may be easly removed when ordinary size pallet loads are to be tiered.

Use of the carriage extension allows the

HOUGHTON WARP CONDITIONER 1429



. . . for lower weaving costs!

Houghton's Warp Conditioner 1429 represents a new approach in the formulation of cotton warp size compounds. It is *lower* in over-all cost. It is a truly efficient size. And there's a third reason: Warp Conditioner 1429 is readily dispersible in water.

Dispersibility Widens Usage

This super-solubility makes Warp Conditioner 1429 applicable over an unusually broad range of the conditions found in preparing warp size solutions. Modern Warp Conditioner 1429 is a blend of anionic and non-ionic compounds, usable in any mill sizing spun yarns.

Write for latest Data Sheet, E. F. Houghton & Co., 303 W. Lehigh Ave., Phila. 33, Pa.

WARP CONDITIONER 1429

. . . a product of

E. F. HOUGHTON & CO.

Ready to give you on-the-job service

Philadelphia, Pa. • Chicago, Ill. • Carrollton, Ga. Detroit, Mich. • San Francisco, Calif. • Toronto, Canada

FOR THE TEXTILE INDUSTRY'S USE—

Four Directional narrow aisle truck to handle loads 15' or longer. In operation, the truck with its load across the forks moves down a wide main aisle and, when it reaches the narrow storage area, moves sideways with its load into an aisle that can be as narrow as 7'. (Request Item No. F-7)

Carbolan Dyes

Arnold, Hoffman & Co., Providence, R. I., reports that its Carbolan dyestuffs have proved their superiority over level dyeing acid dyestuffs, conventional acid milling colors and chrome dyestuffs for application to 100% wool garments durably creased or pleated by the Si-Ro-Set method. The Si-Ro-Set solution is usually applied to dyed wool fabrics and can cause marked shade change with some types of wool dyestuffs. Ten dyes comprise the series: Carbolan Yellow 4G Conc., 3GS and RS; Carbolan Crimson BS; Carbolan Violet 2R; Carbolan Brilliant Blue 2R, and Blue B and Brilliant Blue 2GS; Carbolan Green G Conc., and Brilliant Green 5GS. (Request Item No. F-8)

Polyethylene Resin Emulsions

Addition of Ecco FM 501 and Ecco FM 511 to its growing line of polyethylene resin emulsions has been announced by Eastern Color & Chemical Co., Providence, R. I. Various desirable hands for fabrics are said to be obtainable through use of these products, which themselves are designed for specific purposes through variations in molecular weight of the polyethylene used in their formulation.

All the Ecco polyethylene emulsions are anionic, but stable to acidic as well as to alkaline solutions, once they themselves are in solution. While they impart some softening to the fabrics to which they are regularly applied they also increase abrasion resistance and tear strength. Eastern notes that its Ecco polyethylene resin emulsions are frequently used as contributors to wash-and-wear finishes, because all the formulations in the range are fully non-chlorine-retentive. (Request Item No. F-9)

Temperature Regulator

Barber-Colman Co., Rockford, Ill., has introduced a new temperature regulator for proportional control of water, gas or low pressure steam. The unit is designed for all applications where a self-contained valve assembly may be particularly suited. Being a tight-closing, ruggedly constructed, self-contained unit, it is said to offer all the installation advantages of a self-contained controller, with the additional features of a clearly marked calibated adjusting dial for precise temperature control, a rugged electric industrial motor operator and armored capillary tubing.

Typical applications include package air-conditioning units, hot water storage tanks, plating tank control, industrial process control, and botttle washers. No assembly,

Barber-Colman Co. is offering this new self-contained temperature regulator for controlling water, gas or steam.

linkage, or adjustment is necessary, the company reports, either before or after installation—except for the simple setting of the control dial to the exact desired temperature. The device uses a simple two-wire connection to almost any available power supply. It is said to assure full power throughout the complete valve operating stroke—assuring positive valve positioning, tight closing, and closer, more accurate control for the user. Data sheet F-9310 describing the unit is available.

(Request Item No. F-10)

Anti-Crocking Agent

Low Crock OSE is a new oil soluble anti-crocking agent developed by Eastern Color & Chemical Co., Providence, R. I., for use in machine roller printing. According to Eastern, Low Crock OSE effectively controls both wet and dry crocking of blotch prints and prints of dark shades.

To textile printers, Eastern stresses the feature that Low Crock OSE is a stable oil emulsion and is therefore completely compatible with water-in-oil print paste with no loss in body or viscosity.

(Request Item No. F-11)

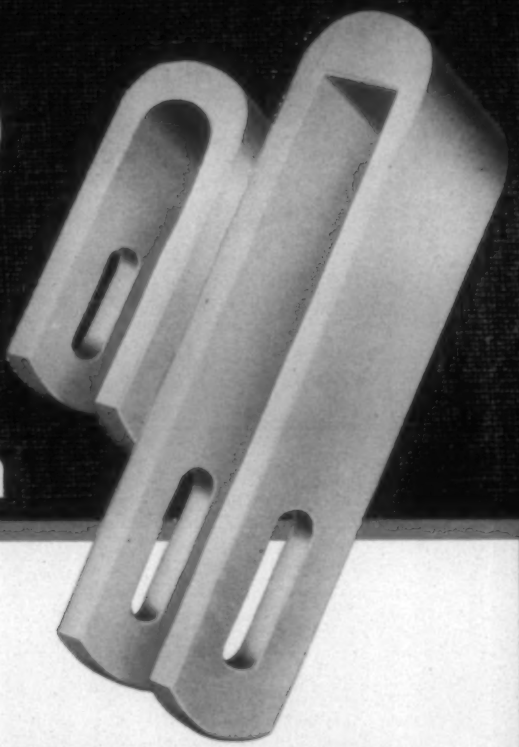
Nuclear Thickness Gage

Radiation Counter Laboratories, Skokie, Ill., has announced the availability of its Ultra-sensitive nuclear thickness gage, Model 42000. The unit measures: (1) fabric thickness to two-millionths of an inch without contacting the fabric; (2) thickness of impregnations, protective coverings and coatings to within 0.01% of total material thickness; and (3) changes in basis unit weight of .005 mg./sq. cm. Use of the gage in conjunction with the firm's automatic controls provides automatic uniform product consistency.

In operation, fabric flows past a small radioactive source. The gage measures amount of radiation passing through the textile. Changes in textile thickness cause changes in strength of radiation detected. This change is shown in units of thickness

Why this lug strap lasts longer...

...insures smoother operation



Because of the great strength of Tex-Hide—a product of Gates *specialized* research—the block can be molded into the strap without the use of bolts or rivets. As a result, straps are streamlined and light in weight.

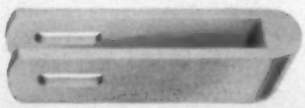
Yet, because of their superb resilience, they will give you longer service, and smoother operation, *than any other strap you have ever used.*

2 big advantages of Gates Tex-Hide Lug Straps

1. Tex-Hide Lug Straps combine great strength with unsurpassed resiliency. Therefore, they soak up blows and shocks *without taking any permanent stretch.*

2. The great resiliency also insures long life for *all parts* of the picking motion, and gives extended periods of operation *without any strap adjustments.*

Super Tex-Hide Lug Straps



Users report up to 5 times longer service on their heaviest looms from Super Tex-Hide than from any other strap.

New Thin-Tex Lug Straps

When extreme flexibility and much lighter weight are needed, Thin-Tex Lug Straps give up to 25% longer life than ordinary straps...and smooth out loom operation.

Gates Distributors are in the Yellow Pages

The Gates Rubber Company, Denver, Colorado

The Mark of *Specialized* Research

Other Products...

Take-up Roll Coverings
Card Bands
Cone and Evener Belts
Spinning Frame Drives

Tex-Hide Harness Straps

Tex-Hide and Vulco Loop Pickers

Reversible Pickers

Gates Lug Straps

FOR THE TEXTILE INDUSTRY'S USE—

or in weight per unit area. Features of the gage include: a.c. amplification through vibrating reed capacitor; input thermostatically controlled at constant temperature; pre-amplifier is remote from measuring point—unaffected by environment; time response is continuously variable from ½ to 30 seconds; full temperature compensation; and a single electronics unit which permits detection at two separate points.

(Request Item No. F-12)

Adjustable Speed Drives

An entirely new line of packaged adjustable speed drives has been introduced by General Electric Co., Schenectady, N. Y. The new Polydyne series represents the first mechanical adjustable speed drives to be offered by the company's gear motor and transmission components department, long a manufacturer of complete lines of integral and fractional horsepower gear motors, speed reducers and special purpose transmissions.

Polydyne drives, available in a wide range of outputs and speed ratios, operate on the proven principle of V-belt-connected, adjustable pitch pulleys. They are being offered from ¼ through 25 h.p. a.c., in output speeds from 5 to over 4,000 r.p.m., with standard speed variations of 2, 3, 4 or 5 to 1. Maximum speed variation, ranging from 6/1 at 25 h. p. to 10/1 at 1 h.p. ratings and below, is also available.

(Request Item No. F-13)

Neutral Developing Azoics

The production of advanced neutral developing azoics has been announced by the Pfister Chemical Works, Ridgefield, N. J. Recently developed, these new azoics can be completely aged in neutral steam with full color yield and are said to be suitable for printing with vats, directs and oxidation blacks.

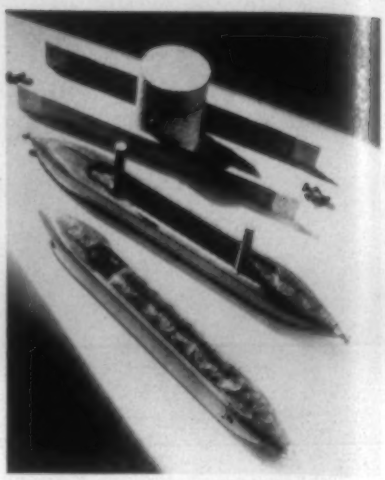
Said to offer better bleed resistance than other azoics during soaping off operations, the new Pfister azoics also provide good light fastness and excellent fastness to washing and chlorine. In addition, they are reported to be the only azoics that can be aged together with fiber reactive dyes. Aging is readily accomplished by passing through an acid bath or the usual acid steam process. Developed primarily for use on cotton or rayon, the new azoics can also be applied on acetate or silk, Pfister reports.

Pfister neutral developing azoics are available in 15 shades including black, bordeaux, blue, brown, scarlet, yellow, orange and red and can be provided in both powder and solution form.

(Request Item No. F-14)

Plastic Shuttle

A new plastic shuttle made of a resin-impregnated cotton laminate has been jointly developed by the Draper Corp., Hopedale, Mass., and Formica Corp. Multiple strips of uni-directional cotton duck,



Pictured in several stages of its manufacture is the new plastic shuttle developed by Draper Corp. in co-operation with Formica Corp.

saturated with resin, make up the sides of the shuttle. These are pre-molded into a frame with a slot down the center for the bobbin. The pointed ends of the shuttle are formed later from a quantity of macerated cotton duck, also saturated with resin. By using macerated material, the compound curves of the heavy ends are more readily molded. The ends are molded around steel tips which are machined to a point after the shuttle is completed.

The macerated material used in the ends of the shuttles is preformed on Stokes Model 294 presses into "plugs," flat discs 3" in diameter and 1½" thick. The plugs which contain an exact quantity of material are pre-heated to molding temperatures in a Girdler high-frequency dielectric heating unit and forced under pressure into the mold for the ends.

The companys' report that the molded shuttle is roughly three times more expensive to make than a wood shuttle but lasts six times longer. Exact cost comparisons are difficult to make, they reported.

(Request Item No. F-15)

G. E. Motors

A new line of a.c. motors, tailored to specific industry needs, is now available from the medium a.c. motor and generator department of General Electric, Schenectady, N. Y. Many different combinations of motor features can now readily be made available, the company says, to meet exacting requirements of many industrial areas.

The completely new Custom 8000 general line with ratings from 100 to 600 h.p. features an entirely new "square look." The styling is said to keep pace with modern trends in appearance design and to offer better enclosure and considerable saving in floor space.

Among improvements cited for the new line were adaptability to specific industry needs, faster installation and easier accessibility for maintenance. Lower noise levels and greater over-all ruggedness were also listed as advantages.

A number of accessory kits such as splashproof louvers or space heaters to protect a motor in damp atmospheres are also

available for quick conversions in the field. The new square shape provides a significant reduction in amount of space required for motors of a given horsepower. Equipped with flat end-shields that make them significantly shorter than preceding models, the new motors offer savings in mounting area which range from 12 to 45%, depending on rating.

Installation is simplified by an enlarged conduit box, and by lifting lugs integrally cast into the motor frame. Nameplates are larger and reverse-etched for easier maintenance. A further maintenance factor: new cast iron flat end-shields, which feature a weight reduction of almost 70%, can now be handled by one man, General Electric reports.

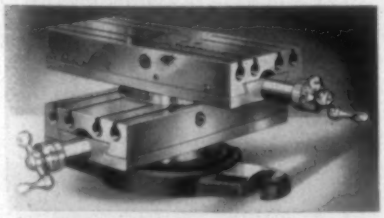
Pre-wound cores permit considerable improvement of the varnish impregnation. This will lengthen insulation life, engineers said. The new anti-friction bearing incorporates a special slinger which greatly improves the ability to purge old grease during regreasing.

Several insulation systems are available with the motors. Among these are Polyex insulation for normal Class A duty, and the new Polyseal Class B system of supported silicone rubber insulation. Using the latter, the company said, open motors may now be considered for some severe applications previously limited to totally enclosed motors. Design of air intakes, fan and punchings is said to contribute to low operating noise level, according to engineers.

During physical strength tests, the new motor is said to have with stood shock loads up to 20 G's, which greatly exceeds shocks normally experienced in operating service or the bumping of railroad cars.

(Request Item No. F-16)

Drilling Table



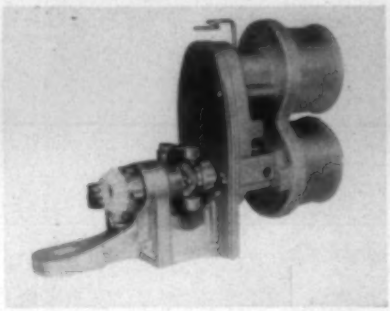
South Bend Lathe has designed this new universal table to produce flexibility and control for drilling and similar operations.

South Bend Lathe, South Bend, Ind., has developed a new Universal Table which is said to provide almost unlimited position control and to afford the greatest amount of flexibility for milling, drilling and for use on the shaper. Both upper and lower slides have graduated swivels and may be turned through full 360°.

Slides can be used without graduated swivels to reduce height if desired. They can be positioned at any angle with each other and may be turned individually or together. Each slide has feed screw with micrometer collar reading in thousandths of an inch. Dovetails are equipped with full length gibs for take-up. The precision ground work surface is 4 x 8⅞" and maximum travel is 4" for either slide. Table has four slots for clamping work. Clamp bolts fit snugly into round slots in such a way that there is said to be little danger of breaking out or otherwise damaging the slots. Slides and bases may be purchased separately if desired.

(Request Item No. F-17)

Positive Clutch Drive



This new positive clutch drive, developed by Fletcher Works Inc., is for feed roll mechanisms designed for running heavy denier yarns.

A new positive clutch drive for feed roll mechanisms designed for running heavy denier yarns has been developed by The Fletcher Works Inc., Philadelphia, Pa. The new unit has driving gears in permanent mesh, having split shaft, with a specially-engineered type of free engaging clutch. This is said to make it possible to run exceptionally heavy yarns at a very low twist at high spindle speed.

Because of the increasing popularity of heavy denier yarns in the textile industry, Fletcher engineers began working on the development of the new unit several months ago. Taws said that the drive has proved more than satisfactory during the test period and that it will be standard equipment on all Fletcher heavy duty Duplex twisters.

(Request Item No. F-18)

Reactive Brown

Cibacron Brown 3GR is the first marketed reactive brown, making it a notable new member of the Cibacron dye family, according to the Ciba Co., New York City. It has excellent light fastness and synthetic resins do not noticeably affect either shade or light fastness. It may be applied on all types of equipment by conventional methods.

It is said to be suitable for direct printing on cotton, rayon, wool and silk. Its versatility is further demonstrated by its reported excellence as a self shade and in combination with other dyes that do not require acid steaming for development. Light and medium shades are dischargeable, and it builds up well from light and muted shades to rich dark browns with Cibacron Black BG.

Cibacron Brown 3GR can be used as a shading dye where its pure yellowish cast will be useful in producing scarlets with Cibacron Brilliant Red B or in producing bottle green shades in combination with Cibacron Blue 3G. The dye is also said to be very useful in the production of greys and tans. It is free of copper and manganese. (Request Item No. F-19)

For the Mill Bookshelf

Cotton Lift Truck

Hyster Co. has introduced this new lift truck designed for the textile industry.

Details of the Hyster Cotton Special, a lift truck designed exclusively for the cotton and textile industries, are explained in a 4-page brochure published by Hyster Co., Portland, Ore. The Cotton Special is a SpaceSaver 30 cushion-tire lift truck of 3,000 lbs. capacity with added safety and performance features for cotton handling. Design modifications include a no-clog cooling system; special engine breathing equipment and electrical system; belly pan to prevent lint pickup; flame and spark arresting exhaust system; and heavy-duty upright. The truck has UL type GS approval. A choice of special load-handling attachments is available. The brochure illustrates special design features of the truck, lists options and attachments, and outlines performance and design characteristics. (Request Item No. F-20)

High Velocity Dryer

J. O. Ross Engineering, a division of Midland-Ross Corp., New York City, has announced the availability of a new, 4-page bulletin on their latest dryer development, the S/P High Velocity Dryer. The bulletin contains data and drawings on the S/P Dryer and explains in detail how it can increase production and dry webs more uniformly. (Request Item No. F-21)

Sewage Treatment

"Water, Sewage and Industrial Waste Treatment Equipment," Book 2617, presents the complete sanitary engineering equipment line of Link-Belt Co., Chicago, Ill. This new 20-page book contains illusrations and photographs of the latest sanitary engineering equipment and also shows flow diagrams of how this equipment can be installed. Standard equipment described includes six types of screens, three types of Straightline mixers, Straightline grit collectors and grit washers, and both the Straightline and Circuline sludge collectors.

Additional equipment for specific requirements include motor-driven scum skimmers, Roto-line scum pipes, Link-Belt traveling bridge sludge collectors and a motor driven transversing bridge, with belt conveyor, for the removal of sludge from sludge drying beds. Special designs, where standard equipment has to meet particular operating conditions, are also illustrated and described. (Request Item No. F-22)

Loom Lubricator

An automatic lubricator that services up to 73 bearings on Draper X-2, X-D and XP-2 Model looms is described in a new 4-page bulletin now offered by Bijur Lubricating Corp., Rochelle Park, N. J. Bulletin ND-23 contains six illustrations and a sketch. The Bijur lubricator operation is fully explained. (Request Item No. F-23)

Nonionic Surfactants

The Emulphogene BC family of nonionic surfactants are described and their properties discussed in a new booklet published by Antara Chemicals, a sales division of General Aniline & Film Corp., New York City. Chemically, these surfactants are alkylpolyethanols with various ethylene oxide content.

These products are said to offer a wide range of commercially useful properties that include wetting, detergency, emulsification, dispersion, solubility and foaming. (Request Item No. F-24)

Gearmotors, Drives

Information on an extensive line of standardized gearmotors, Motogears and fluid drives available for industry has been combined into one new 48-page book now available from Link-Belt Co., Chicago, Ill. Book 2747, "Gearmotors, Motogears and Fluid Drives," describes the functions of these various types of drives and provides detailed selection data, dimensions, overhung load ratings and mountings. It also lists such accessories as couplings, backstops and slide rails.

A total of 45 new units has been added to the line and Link-Belt Motogears and gearmotors are now available in quarduple as well as double and triple reduction units, permitting ratios from 6.2:1 through 985:1. Larger sizes have also been added and capacities now range up to 100 h.p. with output speeds from 280 r.p.m. down to 1.8 r.p.m. (Request Item No. F-25)

Formulating Agent

Two new technical service bulletins on Tenn-Acid 855 have been announced by the marketing research and development department of the Tennessee Corp., Atlanta, Ga. New technical information on the use of this modified alkyl aryl sulfonic acid for the textile and allied industries is reported. The application of Tenn-Acid 855 as a formulating agent for organic solvent-water systems with retained detergency is described. Improved formulations stable over a wide pH range with outstanding hard water resistance result from the use of the substance. Available are TSB-34 on Tenn-Acid 855 and TSB-35 on Tenn-Acid 855 solvent combinations.

(Request Item No. F-26)

Self-Aligning Roller Bearings

Chain Belt Co.'s Shafer Bearing Division, Milwaukee, Wisc., has announced the publication of Condensed Catalog 59A which covers the complete line of Shafer self-aligning roller bearings. The new Shafer catalog is compiled specifically to offer assistance in the proper selection of bearing equipment for greater speed, higher load capacities and longer wear life.

Catalog 59A is said to be filled with factual information on Shafer roller bearing design, specifications, lubrication, seals and installation features that protect equipment.

(Request Item No. F-27)

Check Valves

A 2-page circular, No. 588, describing its check valves, has been published by the Lunkenheimer Co., Cincinnati, O. The circular illustrates and lists, with specifications, some of the many types of check valves in the Lunkenheimer line—bronze, iron and steel for boiler feed lines; for air, water and steam lines; and for controlling chemical and gaseous fluids.

(Request Item No. F-28)

Polyethylene Bagging

A smoothly-operating assembly line technique, designed to achieve fine line edge sealing of products in polyethylene packages with maximum efficiency is outlined in a new illustrated brochure prepared by Amsco Packaging Machinery Inc., Long Island City, N. Y.

The 6-page brochure cites actual case histories and has a list of more than 50 of the nationally-known firms that now use the Amscomatic packaging system. Case histories reveal before and after packaging situations relating to many industries where Amscomatic equipment is in use.

Called the Amscomatic packaging method, the new technique meets production requirements ranging from as few as 10 packages per minute to as many as 100 per minute. Amscomatic packaging units are versatile machines that automatically provide a tight-to-product edge seal to poly bags, eliminating unsightly end folds and seals or underseals and folds. The system

For mills with a future!...the frame of the future

the New WHITIN

PIEDMONT

SPINNING FRAME

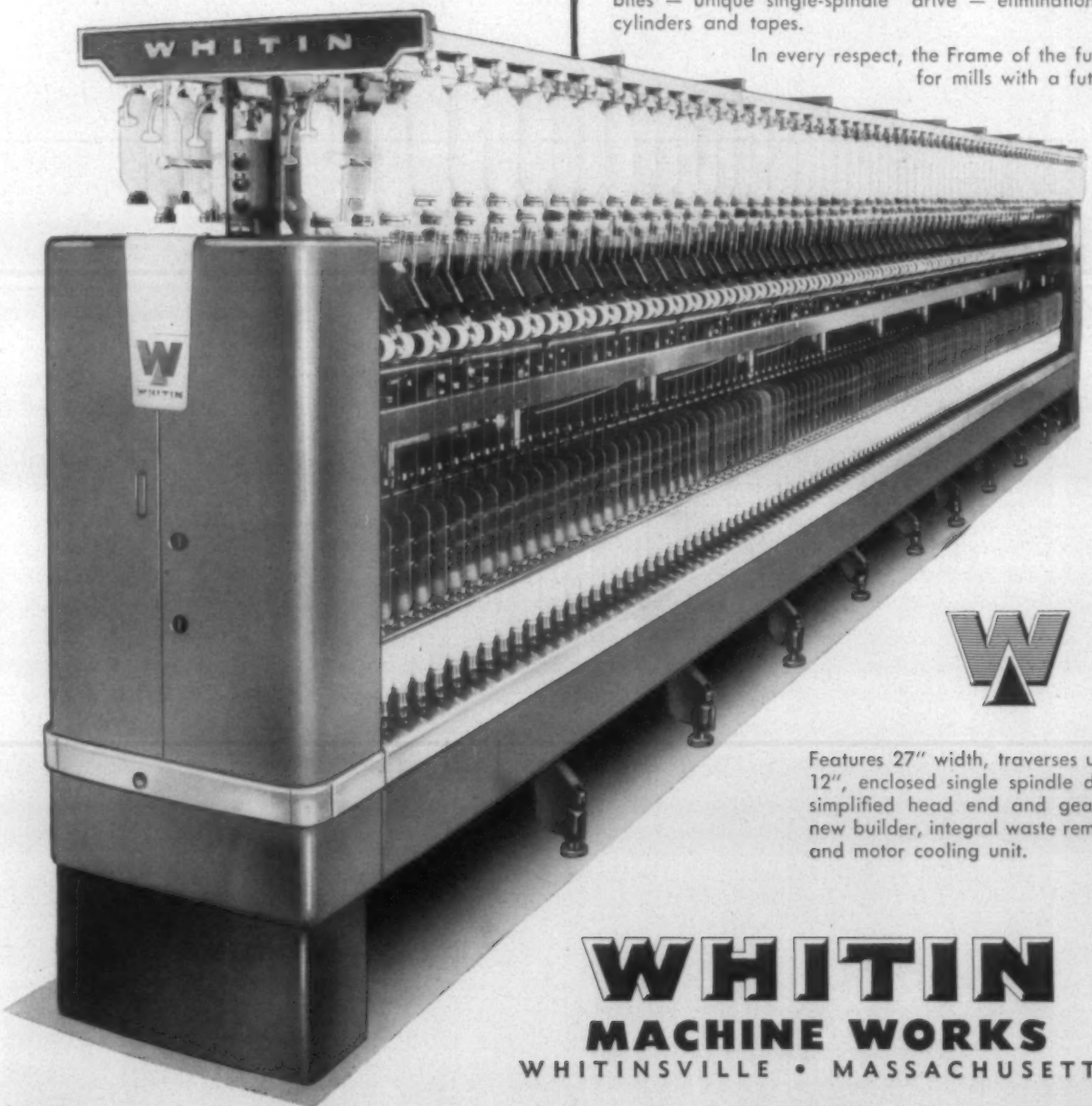
IN the new PIEDMONT, Whitin offers you a Spinning Frame which is not only smart in appearance, not only advanced in design — but which is also foremost in economy of operation. There are PIEDMONT benefits in every phase of your spinning operation.

PRODUCTION: Increases in front roll speed of 25 to 30% more than *average* production — and up to 15% more than *top current* levels.

PERFORMANCE: Simple construction with "built-in" efficiencies — straight line spinning plus SUPER-DRAFT for quality yarn — large "control-wound" packages for reduced spooling costs.

MAINTENANCE: Lowest cleaning costs possible thru streamlining — open construction — ball bearing assemblies — unique single-spindle drive — elimination of cylinders and tapes.

In every respect, the Frame of the future for mills with a future!



Features 27" width, traverses up to 12", enclosed single spindle drive, simplified head end and gearing, new builder, integral waste removal and motor cooling unit.

WHITIN
MACHINE WORKS
WHITINSVILLE • MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

For the Mill Bookshelf

Cotton Lift Truck

Hyster Co. has introduced this new lift truck designed for the textile industry.

Details of the Hyster Cotton Special, a lift truck designed exclusively for the cotton and textile industries, are explained in a 4-page brochure published by Hyster Co., Portland, Ore. The Cotton Special is a SpaceSaver 30 cushion-tire lift truck of 3,000 lbs. capacity with added safety and performance features for cotton handling. Design modifications include a no-clog cooling system; special engine breathing equipment and electrical system; belly pan to prevent lint pickup; flame and spark arresting exhaust system; and heavy-duty upright. The truck has UL type GS approval. A choice of special load-handling attachments is available. The brochure illustrates special design features of the truck, lists options and attachments, and outlines performance and design characteristics. (Request Item No. F-20)

High Velocity Dryer

J. O. Ross Engineering, a division of Midland-Ross Corp., New York City, has announced the availability of a new, 4-page bulletin on their latest dryer development, the S/P High Velocity Dryer. The bulletin contains data and drawings on the S/P Dryer and explains in detail how it can increase production and dry webs more uniformly. (Request Item No. F-21)

Sewage Treatment

"Water, Sewage and Industrial Waste Treatment Equipment," Book 2617, presents the complete sanitary engineering equipment line of Link-Belt Co., Chicago, Ill. This new 20-page book contains illusrations and photographs of the latest sanitary engineering equipment and also shows flow diagrams of how this equipment can be installed. Standard equipment described includes six types of screens, three types of Straightline mixers, Straightline grit collectors and grit washers, and both the Straightline and Circuline sludge collectors.

Additional equipment for specific requirements include motor-driven scum skimmers, Roto-line scum pipes, Link-Belt traveling bridge sludge collectors and a motor driven transversing bridge, with belt conveyor, for the removal of sludge from sludge drying beds. Special designs, where standard equipment has to meet particular operating conditions, are also illustrated and described. (Request Item No. F-22)

Loom Lubricator

An automatic lubricator that services up to 73 bearings on Draper X-2, X-D and XP-2 Model looms is described in a new 4-page bulletin now offered by Bijur Lubricating Corp., Rochelle Park, N. J. Bulletin ND-23 contains six illustrations and a sketch. The Bijur lubricator operation is fully explained. (Request Item No. F-23)

Nonionic Surfactants

The Emulphogene BC family of nonionic surfactants are described and their properties discussed in a new booklet published by Antara Chemicals, a sales division of General Aniline & Film Corp., New York City. Chemically, these surfactants are alkylpolyethanols with various ethylene oxide content.

These products are said to offer a wide range of commercially useful properties that include wetting, detergency, emulsification, dispersion, solubility and foaming. (Request Item No. F-24)

Gearmotors, Drives

Information on an extensive line of standardized gearmotors, Motogears and fluid drives available for industry has been combined into one new 48-page book now available from Link-Belt Co., Chicago, Ill. Book 2747, "Gearmotors, Motogears and Fluid Drives," describes the functions of these various types of drives and provides detailed selection data, dimensions, overhung load ratings and mountings. It also lists such accessories as couplings, backstops and slide rails.

A total of 45 new units has been added to the line and Link-Belt Motogears and gearmotors are now available in quarduple as well as double and triple reduction units, permitting ratios from 6.2:1 through 985:1. Larger sizes have also been added and capacities now range up to 100 h.p. with output speeds from 280 r.p.m. down to 1.8 r.p.m. (Request Item No. F-25)

Formulating Agent

Two new technical service bulletins on Tenn-Acid 855 have been announced by the marketing research and development department of the Tennessee Corp., Atlanta, Ga. New technical information on the use of this modified alkyl aryl sulfonic acid for the textile and allied industries is reported. The application of Tenn-Acid 855 as a formulating agent for organic solvent-water systems with retained detergency is described. Improved formulations stable over a wide pH range with outstanding hard water resistance result from the use of the substance. Available are TSB-34 on Tenn-Acid 855 and TSB-35 on Tenn-Acid 855 solvent combinations.

(Request Item No. F-26)

Self-Aligning Roller Bearings

Chain Belt Co.'s Shafer Bearing Division, Milwaukee, Wisc., has announced the publication of Condensed Catalog 59A which covers the complete line of Shafer self-aligning roller bearings. The new Shafer catalog is compiled specifically to offer assistance in the proper selection of bearing equipment for greater speed, higher load capacities and longer wear life.

Catalog 59A is said to be filled with factual information on Shafer roller bearing design, specifications, lubrication, seals and installation features that protect equipment.

(Request Item No. F-27)

Check Valves

A 2-page circular, No. 588, describing its check valves, has been published by the Lunkenheimer Co., Cincinnati, O. The circular illustrates and lists, with specifications, some of the many types of check valves in the Lunkenheimer line—bronze, iron and steel for boiler feed lines; for air, water and steam lines; and for controlling chemical and gaseous fluids.

(Request Item No. F-28)

Polyethylene Bagging

A smoothly-operating assembly line technique, designed to achieve fine line edge sealing of products in polyethylene packages with maximum efficiency is outlined in a new illustrated brochure prepared by Amsco Packaging Machinery Inc., Long Island City, N. Y.

The 6-page brochure cites actual case histories and has a list of more than 50 of the nationally-known firms that now use the Amscomatic packaging system. Case histories reveal before and after packaging situations relating to many industries where Amscomatic equipment is in use.

Called the Amscomatic packaging method, the new technique meets production requirements ranging from as few as 10 packages per minute to as many as 100 per minute. Amscomatic packaging units are versatile machines that automatically provide a tight-to-product edge seal to poly bags, eliminating unsightly end folds and seals or underseals and folds. The system

For mills with a future!...the frame of the future

the New WHITIN

PIEDMONT

SPINNING FRAME

IN the new PIEDMONT, Whitin offers you a Spinning Frame which is not only smart in appearance, not only advanced in design — but which is also foremost in economy of operation. There are PIEDMONT benefits in every phase of your spinning operation.

PRODUCTION: Increases in front roll speed of 25 to 30% more than *average* production — and up to 15% more than *top current* levels.

PERFORMANCE: Simple construction with "built-in" efficiencies — straight line spinning plus SUPER-DRAFT for quality yarn — large "control-wound" packages for reduced spooling costs.

MAINTENANCE: Lowest cleaning costs possible thru streamlining — open construction — ball bearing assemblies — unique single-spindle drive — elimination of cylinders and tapes.

In every respect, the Frame of the future for mills with a future!

Features 27" width, traverses up to 12", enclosed single spindle drive, simplified head end and gearing, new builder, integral waste removal and motor cooling unit.

WHITIN
MACHINE WORKS
WHITINSVILLE • MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

is engineered to meet the physical requirements of any plant and to reduce substantially, conventional packaging cost. (Request Item No. F-29)

Recording Controllers

Bulletin GEA-6887, titled "Recorders and Recording Controllers," has been published by General Electric, Schenectady, N. Y. The bulletin describes the company's new family of continuous self-standardizing strip-chart recorders and recording controllers for measurement of electrical and process variables. Included are product photographs, application data, typical control system schematics, specifications and dimensions. Employing electronic servo-operated measuring systems, the instruments record with high accuracy while providing sufficient torque to operate a variety of control devices such as switches and slidewires.

A silicon diode voltage source gives continuous standardization without dry cell, standard cell or standardization mechanism. Variables that can be meausred with the instruments include kilowatts, kilovars, d.c. volts, power factor, frequency, time deviation and other electrical quantities plus process variables such as temperature, speed, pressure, pH, vibration, moisture, tension and weight. (Request Item No. F-30)

Marking And Sealing

A new 24-page booklet, "Marking and Sealing Shipments Made Simple," is being offered by Marsh Stencil Machine Co., Belleville, Ill. Subjects covered include: How to stencil mark goods for safe delivery; how to save 25% on sealing cartons with gummed tape; proper kind of ink to use for all kinds of marking; three ways to stencil — brush, roller, spray; conversion tables for weights and measures; export marking data; and a scale for measuring in inches and centimeters.

(Request Item No. F-31)

Surfactants

Tanatex Chemical Corp., Kearney, N. J., has announced the availability of bulletins describing its two new surfactants, Levapal and Tanapon X-70. Levapal is a complex modified anionic surfactant used to give level dyeings on goods containing polyester fibers. It is used to paste the disperse dye using 2% on the weight of polyester fiber present. Levapal is said to be particularly useful on fabrics that are difficult to dye evenly. Included in the technical bulletin is a comparison of surfactants generally used for this purpose.

Tanapon X-70 is a modified solvent-free surfactant used in the preparation of goods containing polyester and other fibers. The company reports that more waxes and fatty matter were removed by Tanapon X-70 than by any other surfactant and surfactant-solvent system evaluated. The bulletin shows a comparison of the cost of scouring per 100 lbs. of goods. (Request Item No. F-32)

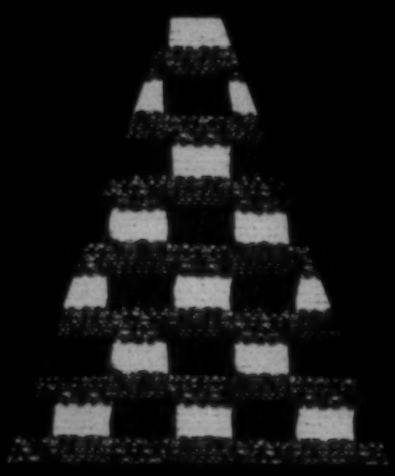
GDC DYES THAT SIMPLIFY COLORING OF SYNTHETICS

Cationic dyes for acrylics.

Genacryl dyes are modified basic dyes characterized by exceptional brightness, good to very good light fastness in full shades and very good washing fastness. They produce especially bright and fast colors on Orlon* and Acrilan† at low cost.

Disperse dyes for polyester fibers.

Genacron dyes are a specially standardized range of dispersed dyes for application on polyester fibers. They produce heavy shades which are fast to light, sublimation and washing. They have minimum staining effect on wool or cotton and are non-tarring.



From Research to Reality

Disperse dyes for all synthetic fibers.

Celliton dyes are the most versatile and practical for fast shades on acetate, triacetate, and polyester fibers. On acrylic fibers, they produce light shades of excellent wash and light fastness. On nylon, they produce clear, level, fast shades, free of barré.

Premetalized acid dyes for acrylics and blends with wool.

Supralan dyes build up well into full, level, fast shades at low cost on nylon and acrylics and blends with wool. Neutral dyeing, Supralan dyes minimize fiber damage and shorten processing time.

GDC continues to keep pace with the expanding synthetic fiber industry by developing modern dyes and application techniques. Call on GDC for assistance with any dyeing problems.

gdc gaf

A SALES DIVISION OF

435 HUDSON STREET · NEW YORK 14, NEW YORK

CHARLOTTE • CHATTANOOGA • CHICAGO • LOS ANGELES • NEW YORK • PHILADELPHIA • PORTLAND, ORE.
PROVIDENCE • SAN FRANCISCO • IN CANADA: CHEMICAL DEVELOPMENTS OF CANADA, LTD., MONTREAL

*DACRON AND ORLON ARE REGISTERED TRADEMARKS OF E. I. DUPONT DE NEMOURS & CO. (INC.) FOR THEIR POLYESTER AND ACRYLIC FIBERS. †ACRILAN IS A REGISTERED TRADEMARK OF CHEMSTRAND CORPORATION.

Serving The Textile Industry

Hartford Textile Unit Named Hartford-Greenville Division

Hartford-Greenville Division is the new name being given to the manufacturing plant of Hartford Machine Screw Co. at Greenville, S. C., which produces Hartford spindles and textile machine parts. Originally, this plant was a branch of the Hartford Machine Screw Co., Hartford, Conn. which in turn was a division of Standard Screw Co. With the expansion of manufacturing facilities at Greenville this plant has developed into a complete production entity augmented with special engineering and development facilities for the textile industry, and the name Hartford-Greenville Division recognizes it as a complete unit of the parent company.

James Hunter Sells Rights To The Hunter Bobbin Holder

The James Hunter Machine Co., North Adams, Mass., has sold the manufacturing rights for the Hunter Bobbin Holder to A. E. Winslow, operating as Whitehorse Farms, Greenville, S. C. For the past two years, Hunter has enjoyed the exclusive manufacturing and sales rights of the bobbin holder which was developed, designed and patented by Winslow. Winslow will continue to manufacture the items at his present location in Greenville. Although discontinuing the manufacture of the bobbin holder, Hunter will continue as a non-exclusive sales agent, and additional sales arrangements will be announced by Winslow in the near future.

A. E. Staley Mfg. Co. To Make Synthetic Polymers

The A. E. Staley Mfg. Co., Decatur, Ill., corn and soybean processor, has announced that it is entering the synthetic polymer field. E. K. Scheiter, president, said it is part of the company's stepped-up research and diversification program launched three years ago. A polymer pilot plant put in operation at Decatur early this year is now in semi-works production of acrylic type emulsions, Scheiter said. The Staley Company also recently announced plans to acquire the U B S Chemical Corp. of Cambridge, Mass.

Acquisition of the chemical concern, subject to approval of U B S stockholders, will add that company's chemical plant and laboratories at Cambridge, a new polymer plant put in operation recently at Lemont, Ill., a polymer plant and laboratory currently under construction at Marlboro, Mass., a technical laboratory near Greenville, S. C., and other U B S facilities.

Staley's entry in the synthetic polymer field was termed a logical extension of the company's traditional interest in natural polymer products derived from corn and soybeans by Scheiter. "The addition of these synthetic chemical products now means that Staley is preparing to meet industrial requirements over a wider range of both natural and synthetic derivatives, as well as combinations of the two," Scheiter said. Staley research developments in synthetic polymers are centered on resin emulsions for textile and other uses.

Warner & Swasey Co. To Build Research Center

Plans for construction of a modern research center on a 12-acre landscaped site in Solon, Ohio, have been disclosed by The Warner & Swasey Co., Cleveland. The new research facilities will comprise 40,000 square feet of floor space. This will include offices, research laboratories, a library, design and experimental areas, a fully-equipped prototype shop, and a high-bay general test section with overhead cranes and other heavy handling equipment.

Purpose of the new facility, according to Walter K. Bailey, Warner & Swasey president, is to centralize all of the company's research and development activities and personnel, insofar as practical, for greater efficiency and economy. This move by Warner & Swasey, Bailey continued, is an indication of the company's progressive attitude toward future growth.

Specific research facilities will include separate machine design and systems design areas, a design and test section for servo mechanisms, a special humidity-controlled design and experimental area for textile machinery, plus a prototype shop capable of fabricating full scale working models of new product designs. Approximately one-third the total structure will be devoted to high-bay test facilities.

Harris Research Labs Opens New Quarters

Harris Research Laboratories Inc., a private consulting laboratory for the textile and allied chemical industries, recently opened new facilities in Washington, D. C. The new two-story building has approximately 18,000 square feet of floor space.

air-conditioned, and is of brick and steel construction. There are three separate, completely equipped laboratory areas. Special facilities include an optical room, dark room and a textile wet processing pilot area. A large, centrally-located constant temperature and humidity room is equipped with instruments for the measurement of mechanical and physical properties of fibers, yarns and fabrics. The building also houses a library, and a lecture room which can be subdivided into two conference chambers.

A special laboratory for surface physics and chemistry has been provided, with fresh, dust-free air, at constant temperature and relative humidity. Equipment is available for the measurement of surface tension, film properties, contact angle, friction measurements and microscopic studies.

Harris' new facilities will serve to expand and diversify its work for the textile and allied industries, and for government agencies. In the textile field, the company has worked with natural and synthetic fibers in the area of fiber properties and their correlation with chemical structure, functional properties of textiles in terms of specific end uses, fabric structure, fabric blends, and chemical modification to alter functional properties, including wash-and-wear and comfort in clothing.

D. H. Caldwell Co. Named Agent For C. C. Sargent

C. G. Sargent's Sons Corp., Graniteville, Mass., manufacturers of dryers and specialized machinery for the textile and other industries, has appointed D. H. Caldwell Co., Charlotte, as its exclusive sales engineering representative for the states of North Carolina, South Carolina, Virginia and Tennessee.

Kluttz Rings Announces Plans For Expansion

Kluttz Rings Inc., Gastonia, N. C., has announced plans for an expansion of its physical facilities at the present plant site. The expansion will include the construction of a wing containing some 10,000 square feet of manufacturing area. The company, now in its fourth year, produces Lubricased and nitrided steel spinning rings, ring-holders, and accessories and traveler cleaners.

Miles Laboratories Institutes Major Corporate Alignment

A major corporate realignment encompassing the formation of a new company which will be prominent in the textile field, has been announced by Miles Laboratories, Elkhart, Ind. The new organization has been named the Miles Chemical Co. and is one of four main divisions of the parent corporation.

It consolidates into one the Sumner Chemical Co., Zeeland, Mich., makers of fine organic chemicals; Takamine Laboratory Division, Clifton, N. J., manufacture of industrial enzymes; and citric acid production, Elkhart, Ind. In the past, Takamine has been active in the textile industry through the sale of enzymes for desizing of textiles and degumming of silks. Sumner is also active here with polymeric dialdehyde for increasing crease resistance and waterproofing. Present plans call for increased activity in this area.

Howard F. Roderick has been named president of the new company. Roderick joined Miles Laboratories in January 1959 as vice-president and recently was named to the board of directors. Administrative and marketing headquarters under the new arrangement will be in Elkhart, Ind.

Expansion Program Set For Dow Louisiana Division

Twelve million dollars in new construction for its Louisiana Division, located at Plaquemine, La., has been announced by The Dow Chemical Co., Midland, Mich. The expansion program includes a polyethylene plant, scheduled to go on stream in about 18 months, and facilities to product vinylidene chloride and Chlorothene, with the production target about mid-1961.

With completion of the Louisiana Division's first expansion program, Dow will have an investment of more than $77 million in the new diversified production center. The new polyethylene plant will employ the method licensed by Imperial Chemical Industries Ltd., with refinements and improved design after extensive research and production.

Vinylidene chloride is copolymerized with vinyl chloride to produce Dow's Saran, a well-known plastic material. Chlorothene is inhibited methyl chloroform, a Dow industrial solvent introduced in 1954. It also is used as a propellant in aerosol sprays.

James Hunter Machine Co. Opens New S. C. Plant

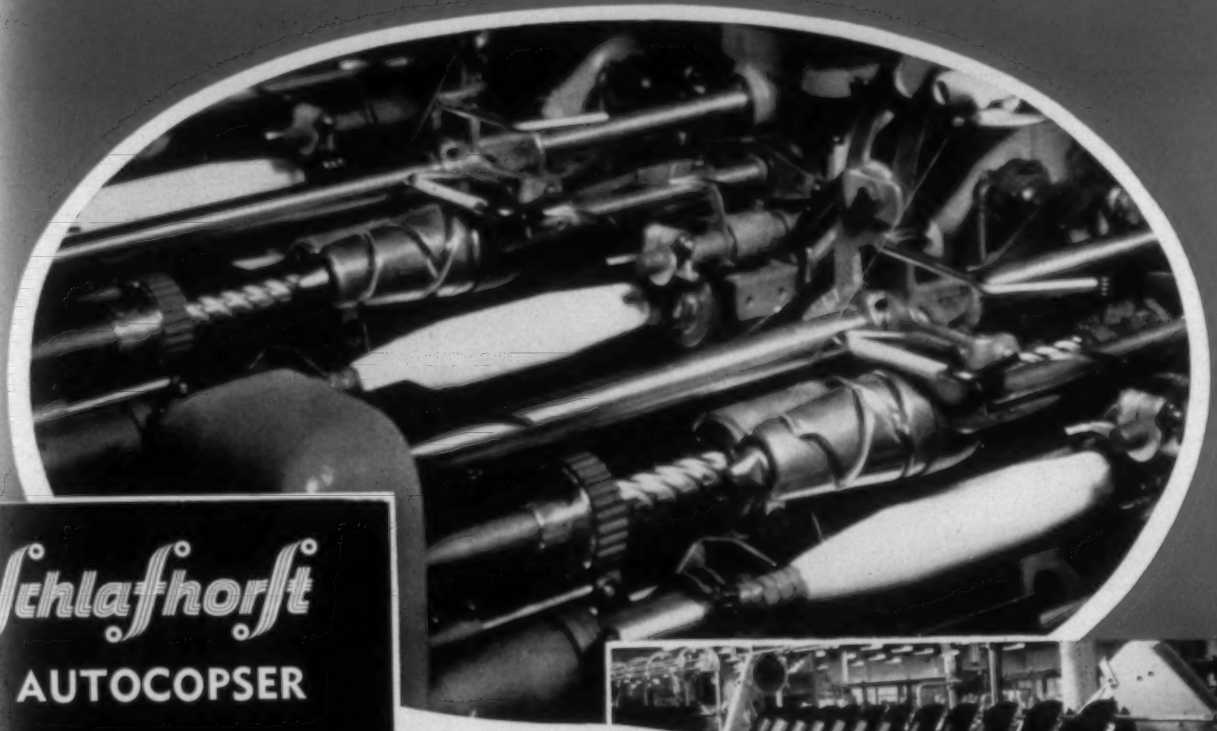
The James Hunter Machine Co., North Adams, Mass., has opened its new plant at Mauldin, S. C. Situated on a 20-acre tract, the 35,000 square foot of manufacturing space doubles the area available in the old location at 745 Lowndes Hill Road, Greenville, S. C. The new plant located in Mauldin, approximately ten miles southeast of Greenville, will specialize in the manufacturing of automatic blending equipment for cotton, synthetic and wool fibers, as well as card and garnett feeds. A feature of the plant will be a display room where automatic blending equipment will be installed for demonstration purposes and, also, to process customers' samples.

Company officials said that the demand for the products of James Hunter Inc. continues to grow, and that additional research facilities are being made available to further develop the line of fiber preparation equipment. The company's new location will also provide improved service facilities for customers of the parent plant, manufacturer of wet finishing, drying and garnetting machinery.

RUGGED • FLEXIBLE • TROUBLE-FREE

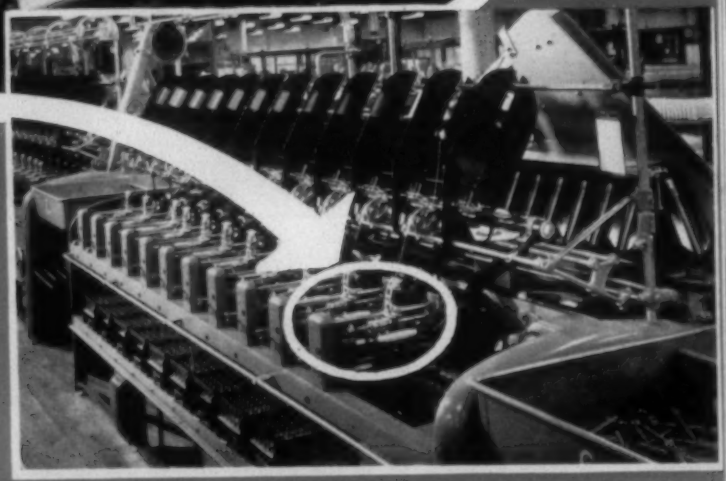
PRECISION

HIGH SPEED QUILLING



Schlafhorst

AUTOCOPSER



☆ COMPENSATING TENSION — Bobbin Tension variation caused by package variation is held to a minimum.

☆ TAIL AVOIDER — Tail at start up is cut off short and tucked under first few turns of feeler bunch.

☆ ROTARY YARN GUIDE DRUM

1. Delicate handling of yarn.
2. Uniform tension from full diameter to nose.
3. No erratic strokes because no reciprocating parts to wear loose.

☆ FEELER WHEEL BOBBIN BUILD

1. All bobbins same diameter regardless of yarn count variations.
2. Layer-locking eliminates ridges and makes non-sloughing bobbins.

☆ YARN END — Yarn end on a full bobbin is always cut off 2" long and remains at tip of bobbin—no backwinding of end.

☆ NO PIECE QUILLS — Each spindle stops at break or run out and end can be tied up and restarted.

☆ Precision pinboarded in sequence.

Imported by

AMERICAN SCHLAFHORST CO.

Sold and Serviced by

THE TERRELL MACHINE CO., INC.

CHARLOTTE, N. C.

New ®TERMACO **AUTOMATIC HOPPER FEEDER**

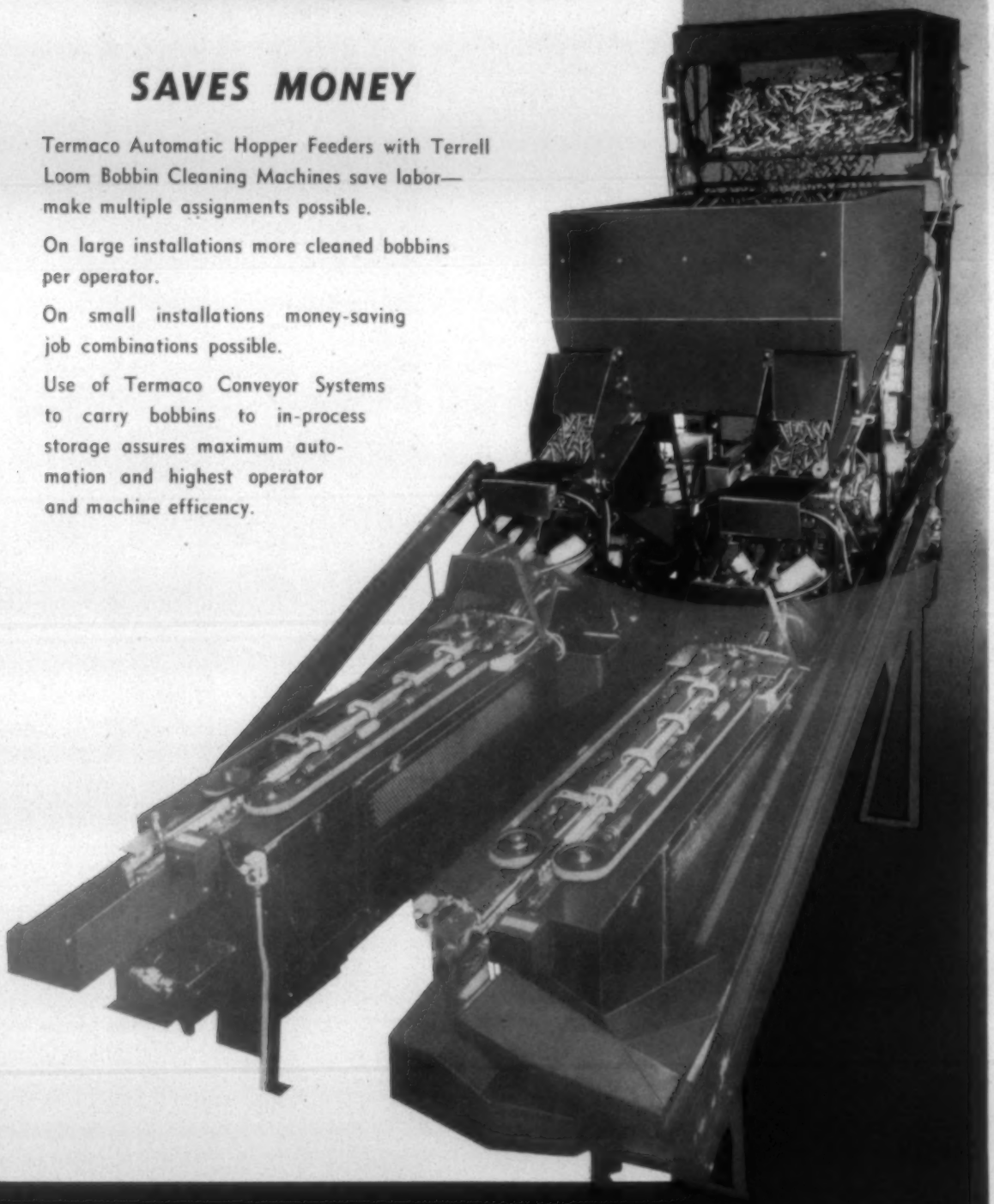
SAVES MONEY

Termaco Automatic Hopper Feeders with Terrell Loom Bobbin Cleaning Machines save labor—make multiple assignments possible.

On large installations more cleaned bobbins per operator.

On small installations money-saving job combinations possible.

Use of Termaco Conveyor Systems to carry bobbins to in-process storage assures maximum automation and highest operator and machine efficency.



A TERRELL ENGINEER WILL SHOW YOU HOW YOU GET FASTEST RETURNS POSSIBLE ON INVESTMENT

THE TERRELL MACHINE COMPANY, INC.

Post Office Box 928 — 1600 South Boulevard

CHARLOTTE, NORTH CAROLINA

textile bulletin

VOL. 85 JUNE 1959 NO. 6

Reporting On The 1959

Cotton Research Clinic

SPONSORED BY THE NATIONAL COTTON COUNCIL OF AMERICA

DISCUSSIONS on new mill machinery and cotton processing methods were features of the tenth annual Cotton Research Clinic sponsored by the National Cotton Council May 12-14 at the Grove Park Inn, Asheville, N. C. The talks centered, generally speaking, on four subjects: (1) ginning-spinning test at Joanna (S. C.) Cotton Mills; (2) shortening test procedures for determining spinning characteristics of cotton; (3) preblending and blending and their effects on spinning; and (4) new machinery developments such as a continuous flow cleaning line and S.R.R.L. granular card. The effect of short fibers on spinning performance and a study of cotton combing were also discussed at the three-day session.

J. M. Cheatham, Dundee Mills, was general chairman of the meeting. Chairman and moderator for the first session, a panel discussion on cotton quality evaluation, was Bob Miraldi, National Cotton Council. Papers presented at this session include: two papers, "Effects On Fiber Properties," and "Test Results," by John E. Ross, U. S. Department of Agriculture; "Mill Processing Conditions," by Joseph L. Delany, Joanna Cotton Mills; "Effects on Finished Fabrics," by James N. Grant, U.S.D.A.; and "Pilot Spinning Laboratory," by Wilbur T. Pentzer, U.S.D.A.

The chairman of the second session was Willard W. McLeod, Coats & Clark Inc. Papers presented included: "The Effect Of Short Fibers On Spinning Performance," by John D. Tallant, Southern Utilization Research and Development Division, U.S.D.A.; "A Test For Spinnability Of Cotton," by Samuel T. Burley, U.S.D.A.; and "A Miniature Test For Evaluating Cotton," by Charles B. Landstreet, U.S.D.A.

Robert W. Smith, Lowenstein Cotton & Storage Corp., was chairman of the technical session held on the second day of the meeting. Topics and speakers included: "The Effects Of Blending Cottons Of Different Fiber Properties," by Louis A. Fiori, S.U.R.R.D.; "Large Scale Commercial Blending," by Otto Goedecke, Otto Goedecke Inc.; and "Massive Cotton Blending For Mill Production," by David E. Howe, The American Thread Co.

The final technical session was chairmaned by E. A. Bentley, Swift Mfg. Co. The session included: "The Continuous Flow Cleaning Line," by Louis Platt, Saco-Lowell Research Center; "Design Of The S.R.R.L. Granular Card," by A. L. Miller, S.U.R.R.D.; "Preliminary Mill Evaluation Of The S.R.R.L. Card," by G. T. Callaway, Avondale Mills; and "A Study Of Cotton Combing," John F. Bogdan, North Carolina State College.

More than 200 textile scientists representing two-thirds of the South's spindles, cotton merchants, machinery manufacturers, educational institutions and government agencies attended the meeting. A round-up of the meeting appears on the following pages.

Pentzer, Grant, Delany, Ross, Moore, Cheatham

The speakers at the first technical session of the Cotton Research Clinic included Wilbur T. Pentzer, U.S.D.A.; James N. Grant, S.R.R.L.; Joseph L. Delany, Joanna Cotton Mills; John E. Ross, U.S.D.A.; and Vernon P. Moore, National Cotton Council. J. M. Cheatham, Dundee Mills, was general chairman of the three-day clinic.

Cotton Selection And Ginning Conditions

By VERNON P. MOORE
National Cotton Council

THE cotton used in the recent test conducted at Joanna Cotton Mills to determine the effects of various ginning procedures on spinning and weaving characteristics came from Tulare County, Calif. The 48 bales used came from an undefoliated field of 23 acres. The cotton was machine picked and split into four lots of 12 bales each. The lots were ginned under conditions: (1) low heat with moderate overhead cleaning system; (2) high heat with moderate overhead cleaning system; (3) low heat with elaborate overhead cleaning system; and (4) high heat with elaborate overhead cleaning system.

Coded identification tags were attached to each bale. The code was kept secret until weeks after the last of the test cotton had been processed in the mill. The cotton was Acala 4-42 and had a grade ranging from low middling at 31.31 cents per pound (low heat with moderate overhead) to better than middling plus at 38.50 cents per pound (high heat with elaborate overhead). Extra cleaning consisted of a burr machine and a seven-cylinder lint cleaner.

Effects On Fiber Properties

By JOHN E. ROSS
U. S. Dept. of Agriculture

THE grade of the ginning-spinning test cotton generally was improved by the use of either overhead seed cotton cleaning machinery or lint cleaners, by drying, or by a combination of these devices and practices. It was found with the use of lint cleaners, higher grades could be obtained by less drying and less overhead cleaning. In general, it was definitely established that the most severe damage to fiber qualities resulted from extreme overdrying of seed cotton during the ginning process in combination with the use of elaborate seed cotton cleaning, burr extractors and double line cleaning.

Fiber Length Affected

Length of fibers was adversely affected by both elaborate overhead seed cotton cleaning and extreme drying. At moisture levels of about 4.0 to 6.5%, fibrograph measurements of the upper half mean length of fibers cleaned with elaborate overhead equipment was $\frac{1}{32}$-inch below that of fibers cleaned with the moderate overhead equipment.

Fiber strength, as measured on the '0' gauge, gave no indication of changes in fiber properties. Strength as measured by the $\frac{1}{8}$-inch gauge, showed changes associated with extreme reductions in moisture which could be considered as being reverse to processing performance. Fineness measurements, as determined by the Micronaire, indicated that the cotton was mature and well developed and that this factor was not affected by ginning treatments.

Mill processing caused little or no change in the original short fibers of cotton ginned with moderate overhead cleaning equipment but appeared to increase short fibers in cotton ginned with elaborate equipment.

Short Fibers

The most important quality measurement in indicating performance was the proportion of fibers shorter than $\frac{1}{2}$ inch in lint cotton. Approximately 64% of the variation in ends-down in spinning 30s yarn and 86% in spinning 40s yarn was accounted for by variation in the proportion of short fibers. On the average, an increase of 1% in short fibers was associated with an increase of 13 ends-down in spinning 30s yarn and of about 60 in spinning 40s.

The short fibers caused by the extreme treatment—elaborate overhead cleaning at very low moisture levels—had a dominant affect on ends-down in spinning. With less severe treatments, short fiber variation accounted for 40 to 55% of ends-down variation. An increase of about 20 ends-down went along with an increase of 1% in short fibers.

It was found that 42% of the variation in short fibers was associated with variations in lint moisture content at the time of ginning.

Highest Loom Stops

The lots of cotton subjected to the most extreme drying and cleaning conditions, and which yielded the highest ends-down and weakest yarns, also had the highest number of loom stops. About 45% of the variation in warp stops and over 95% of the variation in filling stops was associated with corresponding variation in ends-down.

Average break factors for the two yarn numbers spun, 30s and 40s, generally showed a decrease resulting from drying, from overhead cleaning, and from lint cleaning. Where higher grades were obtained by the use of all of these means, break factors were usually lowest. For the 12 lots included in the study, there was an inverse correlation, with *the highest grades having the lowest break factors*. It should be noted that in this test, ginning practices were the only variables. Grade was not a function of weather.

Average yarn appearance grades for the two yarn numbers spun gave only a slight indication of the effect of ginning practices on this factor. There was little correlation between this factor and the processing characteristics of the cotton.

Job Assignments

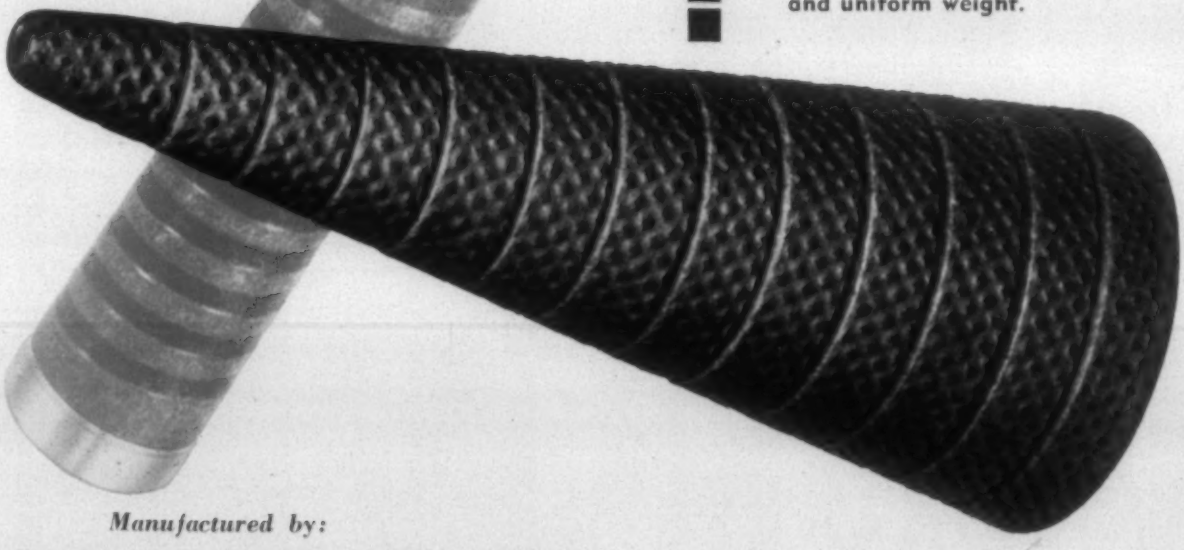
The side assignments for processing lots which received minimum cleaning and were dried only to moderate levels were much greater than for lots subjected to the maximum treatments. This relationship was more pronounced in spinning 40s than 30s. Drying to a very low lint moisture content appeared to exert the greatest influence on the spinning performance of the lots. Elaborate overhead and low moisture reduced side assignments on 40s by almost 50%. Major reductions in the number of looms assigned per weaver were necessary when running cotton from the elaborate overhead lots.

Elaborate overhead and low lint moisture increases spin-

We make our own paper. These huge machines ensure a constant supply of the basic material for Adolff tubes, cones and yarn carriers of all types.

We control every stage of manufacture, from raw material to finised product.

Adolff yarn carriers are internationally famous for their dimensional stability and uniform weight.



Manufactured by:

EMIL ADOLFF • REUTLINGEN, W. GERMANY

U. S. A. Central Organization: Textube Corporation, 695 Summer Street, Stamford, Conn.
Sub-Agents for the South: Watson & Desmond, 220 West Fourth Street, Charlotte, N. C.
Sub-Agents for Canada: Crowther Limited, 212-214 Victoria Ave., Westmount, Montreal, P.Q.

ning and weaving labor costs 1.4 cents per pound of cloth. Cottons which were not overdried and run through the elaborate overhead and two lint cleaners had a labor cost of 1.7 cents per pound of cloth lower than the overdried stock. At relatively high lint moisture levels, elaborate overhead machinery added approximately 0.8 cents per pound in additional spinning and weaving labor costs as compared with moderate overhead cleaning. Elaborate overhead, low moisture and double lint cleaning cost 2.5 cents per pound of cloth more in direct spinning and weaving labor costs to process than did cotton ginned on moderate overhead cleaning set-ups with two lint cleaners and high lint moisture.

Fabric Evaluations

The committee which was assembled to evaluate the fabric made in the test found the greige goods almost identical in quality and value. Over all, there was not more than 0.25 cents yer yard difference in the highest and lowest ranked greige goods. In the dyed state, however, cloth defects were more noticeable and the evaluation committee stated that the lots ranked from seven to 12 were unsuitable for usual print cloth outlets. Significantly, *five of the top ranked six lots* were from cotton ginned with *moderate overhead cleaning and at relatively high moisture* levels.

The lower grades of cotton in the test were cheaper for the mill to buy and were processed at lower labor costs. The paradoxical situation is that the lowest grades also produced the highest quality goods.

Mill Processing Conditions

By J. L. DELANY

Joanna Cotton Mills Co.

THE organization of the mill spinning and weaving the test ginned cottons was described by Joseph L. Delany in his talk. Drafts and machinery employed in the processing was pretty much conventional. The mill is equipped with S.R.R.L. opener-cleaners.

A simplified explanation of, as he described it, "the test to end all tests" was given by Delany at a previous meeting and published in the May issue of TEXTILE BULLETIN, page 37. Test results are all contained on graphs and bar charts.

Effects On Finished Fabrics

By JAMES N. GRANT

Southern Regional Research Laboratory

FABRICS made from lint cotton subjected to 12 combinations of ginning practices were tested as greige, bleached and resin treated fabrics. The seed cottons dried to the lowest moisture level before ginning produced the weakest greige fabrics. (See Fig. 1). At a comparable moisture level of drying, the breaking strengths of fabrics for

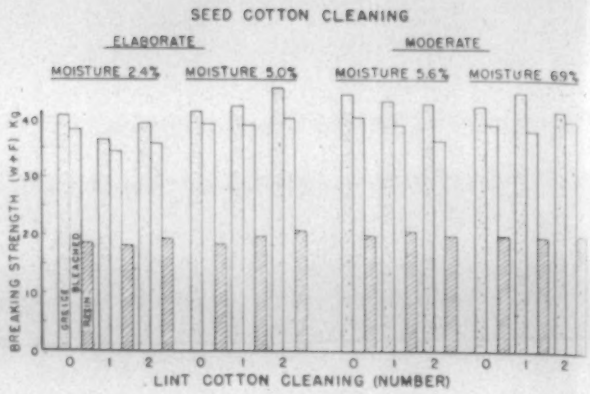


Fig. 1—The cottons dried to the lowest moisture level before ginning produced the weakest greige fabrics. Resin treatment reduced appreciably the breaking strength with the differences between the fabrics coming more nearly equal.

elaborate and moderate seed cotton cleanings were equivalent. The effects of lint cleaners were very inconclusive.

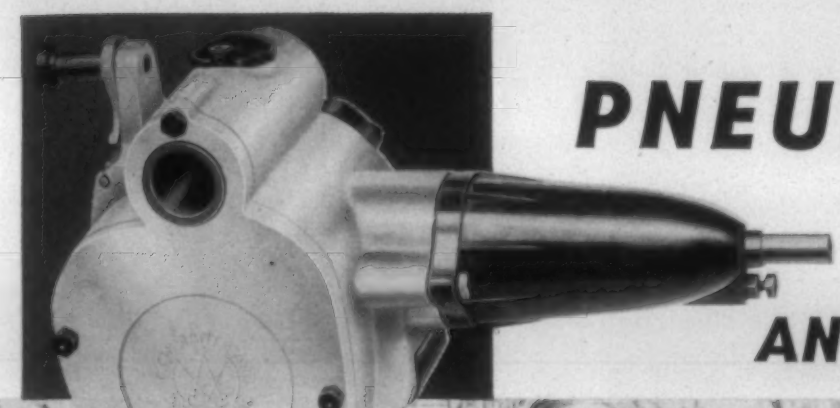
The density of cellulose of the fabrics after bleaching was slightly greater for the three excessively dried cottons. However, the effects of molecular changes were not detected in moisture regains, flexing and abrasion, or resin add-on. The cottons were tested for moisture regain at three stages: card sliver, bleached fabrics, and resin treated fabrics. Moisture regain was essentially the same for the three. At standard conditions, regain was lowest in the resin-treated fabrics and highest in the card sliver.

Alkali swelling percentages indicated differences associated with fiber fineness in the lints from several combinations of practices. Drying effects were probably reflected in alkali swelling data for the three overdried lots. Differential dyeings of lint and fabrics gave colors which were related to fiber fineness rather than ginning practice.

The test fabrics responded equally to resin treatment. Resin treatment reduced appreciably the tensile and tearing strength, flexing and abrasion resistance of the bleached goods. The percentage differences between fabrics for each of the properties was usually less after the resin treatment.

Smith, Cheatham, McLeod

J. M. Cheatham, Dundee Mills, was general chairman of the clinic. Technical session chairmen included Robert W. Smith, Lowenstein Cotton and Storage Corp.; and Willard M. McLeod, Coats & Clark Inc.



PNEUMAFIL

PROUDLY ANNOUNCES...

CONSTANT CARD

The successful use of CONSTANT CARD by mills throughout Europe and Asia indicate its destiny to become standard and essential equipment with the American textile industry. There is a 170 card installation in the United States, and many more leading mills are starting to make installations. Equipment is available for immediate delivery.

PNEUMAFIL®

Pneumafil Corporation announces its appointment under exclusive license to manufacture and supply to the United States and other North American mills, the famous CONSTANT CARD which was developed and perfected by C. A. Constant Card, Barcelona, Spain.

CONSTANT CARD is a self-contained, vacuum suction system which greatly improves the carding action of the cotton-type card by maintaining a constant fiber load on the cylinder, thereby giving a superior and constant carding action between flats and cylinder.

Stripping cycles are increased up to 120 hours, resulting in phenomenal fiber savings, labor savings, and quality improvements. The equipment pays for itself in a very short time.

A Pneumafil representative will be pleased to call, at your convenience, to discuss all aspects of CONSTANT CARD.

PNEUMAFIL CORPORATION
CHARLOTTE 8, NORTH CAROLINA

Other Products for Progress— UNIT SYSTEM • LINT FREE CREELS
PNEUMASTOP • CENTRAL SYSTEMS • PNEUMACLEAR • PNEUMAKOOL

Tallant, Burley, Landstreet

Speakers at the second technical session of the clinic were John D. Tallant, S.R.R.L.; Samuel T. Burley Jr., U.S.D.A.; and Charles B. Landstreet, U.S.D.A.

The Effect Of Short Fibers On Spinning Performance

By JOHN D. TALLANT
Southern Regional Research Laboratory

THE investigation on which this paper is based was carried out by cutting sliver into 1/4 and 1/2-inch segments and adding the resulting short fibers to the parent cotton. The results indicate that the short fibers are detrimental to virtually all yarn and fabric properties. A 1% increase in fibers shorter than 3/8-inch causes a strength loss in yarns of somewhat more than 1%. The quantities of cotton used for the study were insufficient to draw conclusions on neps, waste or processing efficiency.

Even though classer's length has long been used as an important criterion of a cotton's spinning value, it is well known that two cottons having the same classer's length may have different spectra of length distribution. One may have significantly more short fibers than the other. While this feature of cotton has long been speculated upon, little quantitative examination has been done. This has undoubtedly been the case primarily because of the great difficulty and time consumption involved in physically sorting out and measuring the various length classes by techniques such as the Suter-Webb sorter.

Short fibers were obtained for the tests by processing some of each of the two bales of Bobshaw cotton through a conventional top cutting machine such as is used in the worsted industry. The cutters were set to give 1/4-inch segments. Due to nonparallelization and doubling of fibers, there was an appreciable percentage longer than the nominal cut length. Of course, there were many fibers shorter than the nominal length.

The test was run by carefully mixing the short fibers into the parent cotton on a picker apron in approximately seven pound lots for each short fiber level. Besides the control cotton, three levels of short fiber content—7, 14 and 21% fibers by weight—were added. These percentages were made up of fibers from either 1/4-inch or equal parts of 1/4-inch and 1/2-inch segments. The lots were then normally processed and samples were taken at the second drawing for fiber analysis.

Fabric Test Results

Fabrics made from the test cotton showed a progressive deterioration of all properties tested as the short fiber content was increased. A possible exception was the decrease in air permeability with an increase in short fibers. This could be either desirable or undesirable depending on end-use. This particular effect was attributed to greater hairiness of filling yarn with higher percentages of short fiber content. Strip breaking strength, tear resistance and flex abrasion were all degraded by about equal or greater percentages than the strength degradation noticed in the yarns.

Summary

Where short fibers are defined as those fibers 3/8-inch and shorter, and hence those not likely to break when the yarn ruptures, it appears that the following conclusions may be drawn:

(1) Short fibers are detrimental to yarn strength, both skein and single strand, and to virtually all fabric properties.

(2) Increasing levels of short fiber content while decreasing the maximum strength available from a cotton do not appear to affect the twist required for that maximum strength.

As a further corollary from this experiment it appears that although the effect of the intrinsic fiber elongation can be readily traced through the yarn and into the fabric state, fiber elongation as measured by the Stelometer at 1/8-inch gauge length has no effect on the conclusions drawn above.

A Test For Spinning Performance

By SAMUEL T. BURLEY JR.
U. S. Dept. of Agriculture

A small scale spinning test will permit evaluation of cotton with a ten-pound sample instead of the regular size sample of several hundred pounds. The new method is based on the common knowledge that finer yarn numbers spun from the same cotton under the same organization and conditions produce a greater number of end breakages per hour. In the method, a series of yarn numbers are spun to obtain the relationship between yarn number and the number of end-breakages.

Equipment used in the test must be in good mechanical condition. Variables which must be held constant are spindle speed, twist multiplier and relative traveler size. A standard test spindle speed of 8,500 r.p.m. is proposed for testing all cottons and all yarn numbers. Standard twist multipliers for short, medium and long staple cottons are 4.40, 4.00 and 3.80, respectively. Because these variables

re difficult to keep constant, it is necessary to spin a range of numbers around a given traveler number and twist gear in order to get reproducible results.

The number of end-breakages for various yarn numbers is plotted on a graph. The point where this line intersects an arbitrary number of end-breakages line is defined as the spinnable limit.

Test Operation

The test is carried out on 84 spindles with roving being divided equally among them. Ends-down on the roving frame are not put up because the piecing may cause a spinning end to come down and counted. When four yarn numbers are run with ends-down in the general range of from 10 to 50 the points are plotted on the graph and a trend line is drawn. The yarn number at which this trend line intersects with the 20 ends-down per one-hour line is considered to be the spinnable limit of the cotton.

The test results may be expressed either as spinnable limit in terms of yarn number or they may be converted to a spinnability index when a control sample is used. The spinnability index is obtained by dividing the spinnable limit yarn number of each lot by the value for the control lot and multiplying by 100.

The problem of reproducibility of the results over a period of time at the same laboratory and between laboratories will require further work. The method is useful in its present stage of development, however, for comparing the spinning performance of different cottons on a relative basis by using control or base lots.

A Miniature Test For Evaluating Cotton

By CHARLES B. LANDSTREET
U. S. Dept. of Agriculture

THE results of a study to develop a spinning test that will adequately evaluate breeding material from the standpoint of yarn strength and be economically feasible to test large populations was discussed in this paper. Three factors had to be considered in developing the new spinning test. First it was necessary to determine the minimum amount of lint that could be efficiently processed on conventional equipment. Second, the smallest representative sample that a plant breeder could be expected to obtain had to be determined; and third, a method had to be developed for rapidly determining yarn strength.

Experiments showed that a half-pound of cotton could be processed efficiently and was also the smallest reliable sample that could be easily obtained. The adoption of such a small sample meant a new method for measuring yarn strength had to be evolved.

To meet the small sample requirement, a miniature skein 20 inches in circumference with 40 turns was selected and a reel was built for winding the skeins. A Model J tester was modified to break this skein.

The test is performed by weighing a half-pound sample when the cotton is received. A fiber sample is taken from which two Fibrograms, four Stelometer breaks and two Arealometer readings are made. The sample is put through a miniature opener designed for opening and cleaning very small samples of lint cotton. Carding samples are made into laps by hand on a card feed tray. Two 40-grain slivers approximately 65 yards long are made at the same time on a double coiler card. The stock is drawn twice, six doublings each time, and the 45-grain finisher drawing is divided into ten pieces each three yards long.

On roving, 1.15 hank is made. One doff of ten bobbins is made for each sample. The roving is single-creeled for spinning 105 yards of 22s yarn twisted for maximum skein strength from each of ten warp bobbins. Three skeins are wound from each of ten bobbins and broken on the Model J tester to give 30 breaks per sample.

Twist Multiplier

Only one twist multiplier can be used with each spinning test sample because of the small sample size and the time requirements. The yarns are spun for maximum skein strength and the optimum twist multiplier is predicted from an equation developed at the Knoxville laboratory. The basis for the prediction is the fiber length and fineness.

The half-pound sample limits the variety of information obtainable. For example, the test will not give an accurate indication of waste percentages. Nor will the relatively gentle processing used permit an accurate indication of yarn appearance to be expected from normal mill operations.

The Effects Of Blending Cottons Of Different Fiber Properties

By LOUIS A. FIORI
Southern Regional Research Laboratory

THE purpose of the study was to compare the processing behavior of a cotton mixture composed of a blend of very fine and coarse fibers with that of an unmixed cotton sample of about the same average fineness (control). This

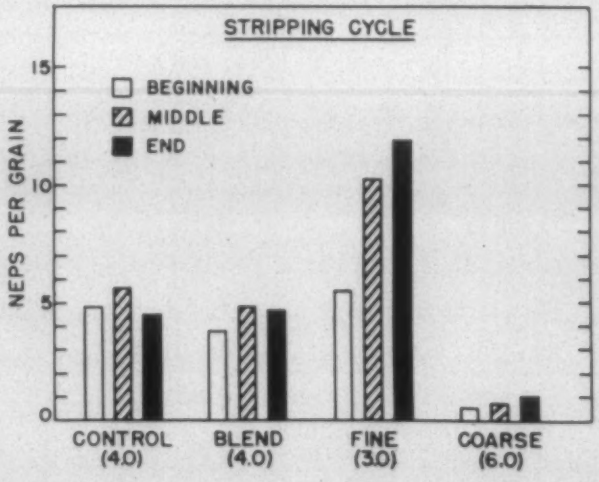
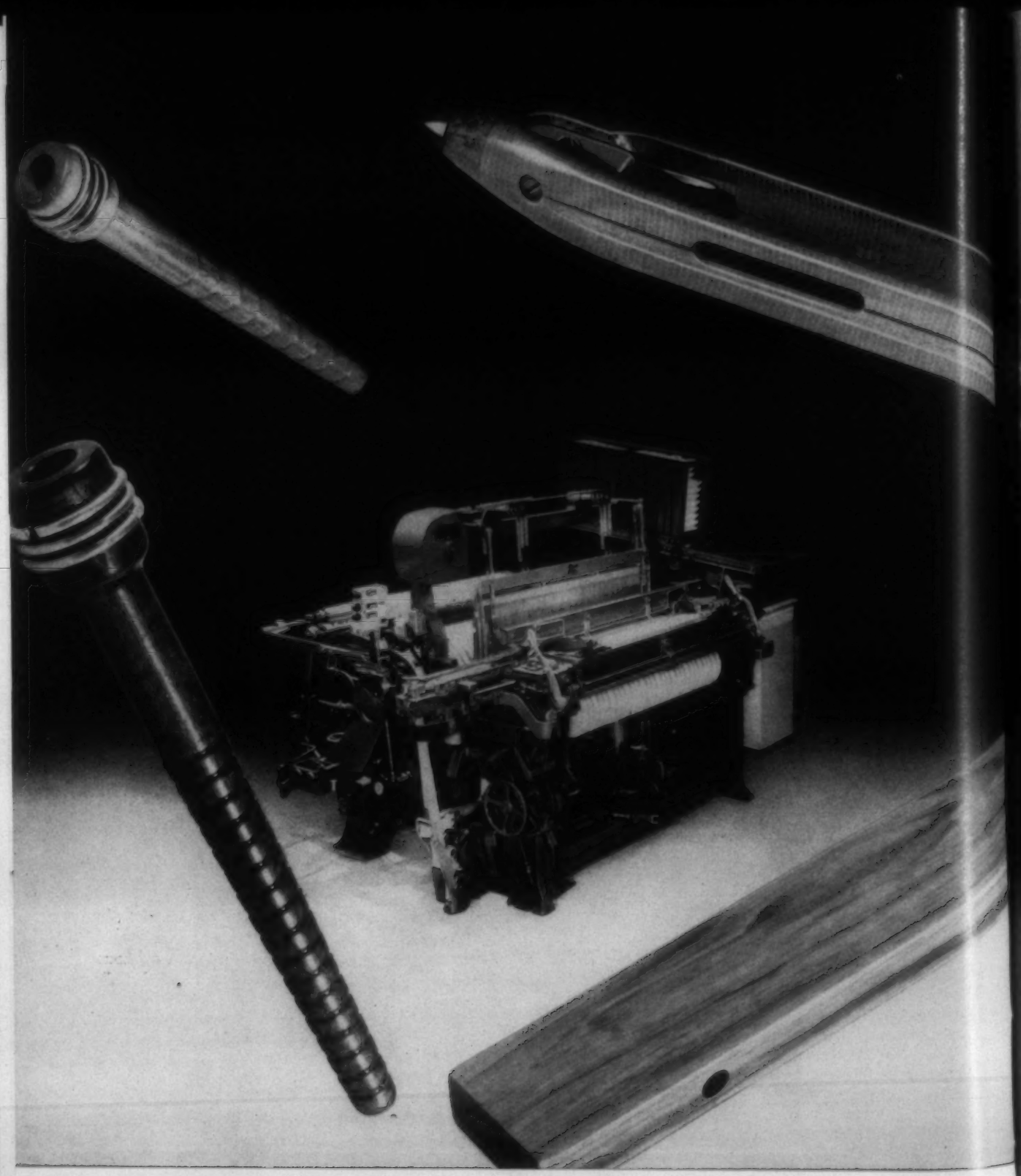


Fig. 2—Nep formation data obtained during the carding of the various cottons.



Planned for profit . . . Greater weave room efficiency and profit is more easily accomplished when Draper looms are backed by Draper accessories and <u>original</u> Draper repair parts. It's just good business sense to look to the <u>original</u> loom builder for quality in essential accessories and repairs. Every part bearing the Draper trademark reflects careful

development and extensive mill trial. For these reasons, Draper parts and accessories give the maximum in service and performance. Why take chances on misfits or mongrel designs? When you specify **original** Draper products you are protecting your profit picture.

DRAPER CORPORATION

HOPEDALE, MASS. • ATLANTA, GA. • GREENSBORO, N. C. • SPARTANBURG, S. C.

was accomplished by blending 60% of the fine (3.0 Micronaire reading) with 40% of the coarse (6.0 Micronaire reading) cottons resulting in an average Micronaire reading of 4.0. The test was completed by comparison of the results found with the blended cotton with those of a control cotton whose Micronaire reading was also 4.0. The fiber properties of the fine, coarse and control cottons were approximately equal except for Micronaire.

Fiber Distribution

From fiber distribution tests it appears that the fine and coarse cottons can be blended to produce a fineness distribution typical of that found in a normal unblended cotton. However, it is probable on a single fiber basis the extremes in fineness can be found.

Fig. 2 shows the nep formation data obtained during the carding of the various cottons. For all practical purposes the blended and control cottons are very similar in nep content. The test shows when a coarse cotton of low nep potential is blended with a fine one of high nep potential, a nep value in between the two nep levels can be expected. This was true whether neps were counted near the beginning, middle or end of the stripping cycle. Neppiness increased, of course, in all cases as the cycle approached completion.

Roving Twist

Since fineness of the fiber influences the amount of twist used for efficient drafting, particular attention was given to the reaction to the roving twist of the various cottons. Results show twist required is practically the same and obviously average fineness rather than the extremes in fineness is the determining factor for proper roving twist.

The twist-strength curves for yarns spun from the blended and control cottons are similar in all respects. It is of particular importance that the same twist is required to obtain maximum strength in both yarns, even though yarns made from the blended cotton contain fibers varying extremely in fineness. It is apparent that the low yarn strength resulting from use of coarse fibers is offset by the addition of fine fibers. The observations made for skein strength hold true for single-strand strength. The blended cotton yarns have break elongation values proportionately between values for fine and coarse cottons. Blended and control cottons have about the same break elongation values.

Yarn Uniformity

Generally, the uniformity of yarns spun from the blended and control cottons is about the same for the 14/1 and 20/1 yarns of all twists. For the 36/1 yarns and with all twists the yarn spun from the control cotton were more uniform than those spun from the blended cotton. The coarse fibers in the blended cotton causing a more rapid approach to the spinning limits of the cotton was given as a partial explanation for this tendency.

Fig. 3 shows the relationship between cumulative ends-down in spinning and doffs for the yarns spun from the blended and control cottons. Generally, yarns produced from the blended cotton spun with fewer ends-down than did those from the control cotton. The difference was small, however, and was said not to be statistically significant at the 95% probability level. These results were from spinning 21/1 yarn with warp twist. Performance when spinning finer yarn numbers might be in favor of

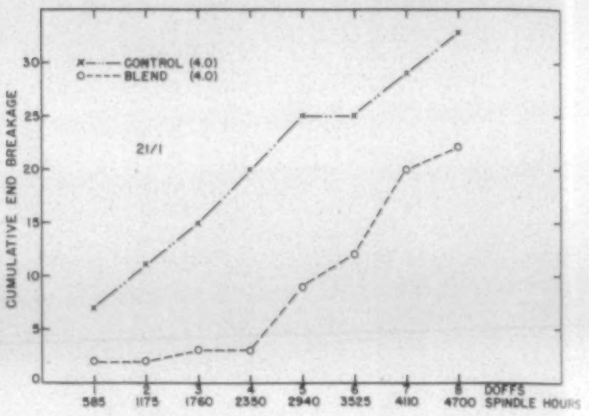


Fig. 3—The relationship between cumulative ends-down in spinning and doffs for the yarns spun from the blended and control cottons.

the control cotton due to the inclusion of coarse fibers in the blended cotton.

The various yarns were subjected to post-spinning operations in the test. Results show that post-spinning operations affect each cotton alike, since the strength, uniformity and elongation of yarns subjected to loom rocking are similar. Even the expected drop in yarn break elongation from the bobbin to loom state is about equal for the two comparative yarns. This is proof that the blended cotton in the yarn form can withstand the stresses of post spinning operations equally as well as the control cotton in spite of the presence of extremely fine and coarse fibers.

It appears feasible that a mill should be able to blend fine and coarse fibers with a cotton of average fiber fineness (4.5 Micronaire) producing a blend whose processing characteristics are no different than the unmixed cotton. It should be cautioned, however, that wide variations in average fineness of a cotton mix may be expected when blending cottons of the type used in this study unless proper precautions are taken to insure a homogeneous mixture of fibers through use of carefully controlled mixing procedures in the opening room.

Large Scale Commercial Blending

By OTTO GOEDECKE
Otto Goedecke Inc.

IN regard to the variables found in cotton, the capriciousness of nature affects cotton to a degree unequalled in any other textile fiber. Certainly it create variables far beyond those in the synthetic fibers. Present harvesting and ginning methods have not helped this situation. Uniformity comes by degrees within the bale and decreases by degrees as more bales are added to the computation. It is only when we begin to average the quality factors in a given lot of cotton that we reach for the advantages in cotton that we call versatility. Some of cotton's variables are its most potent quality attributes. It takes know-how to use them.

Ten years ago sales were made to most of the consuming mills for a specific grade and staple description. Now most of the customers want to see samples or they will

ist upon a type which not only gives grade, color and ple, but also specifies the year and area of growth, the ssley strength, the Micronaire, and sometimes a fiber ay. The only remedy to the situation is to ship from a y large stock or to blend the cotton. The limiting factors blending are the availability of a selective inventory of alities and a competent staff with the know-how. It can done either in the mill or in a commercial operation.

The degree of uniformity accomplished by a blending eration (either mill or commercial) depends on the de- ee of efficiency of the machines involved and the accuracy the laboratory selecting the mix as well as the reliability the personnel in the opening room. If done commercially, the cotton merchant must be mindful that his responsibility towards his customer has been greatly increased. He obli- gates himself to meet processing performance of the cotton to an extent that he has agreed upon with his customer. It extends merchandising to satisfactory performance service.

Massive Cotton Blending For Mill Production

By DAVID E. HOWE
The American Thread Co.

RESEARCH literature in the cotton industry is unanimous in its advocacy of blending. The American Thread Co. recognized the variables in cotton as has everyone else, and we had only partly overcome them by careful selection and opening room mixes. We still found trouble in color and in physical yarn characteristics for four major areas: (1) differences in bales within a given shipment; (2) differences between shipments; (3) differences in grades or varieties within a mix; and (4) differences from one crop year to the next. These are the reasons we decided to go ahead (with preblending) on a major scale.

What should be preblended? American Thread Co. blends according to Micronaire, color, and across grades in certain instances. More than that, we blend across various shippers' lots, we blend to maintain the greatest continuity of mix minimizing abrupt raw stock changes, and, of course, we blend very carefully from one crop year to the next.

How To Preblend

American Thread first approached the problem by doubling and then tripling the number of bales in the opening room as being the most economical and flexible method of getting better blends. This method reduced the incidence of color variation but did not correct it. We then opened, blended and rebaled several lots of 100 bales each, and followed these through the mill to find a spectacular reduction in color variation. This was the final test for the company and it went ahead on construction of its present preblending line consisting of ten blending feeders, made by Fiber Controls Corp., six Saco-Lowell F-5 hoppers and a Murray double-box bale press. The ten blending feeders feed to the F-5 hoppers where the stock is further mixed and blended. Suitable aprons and distributors are used to transport the stock.

There is no cleaning equipment whatever in this line and the cotton receives an absolute minimum of handling. Bales are opened on the third shift, given a chance to bloom and are blended on the first and second shifts.

Since we have found our greatest variance to exist between lots of 100 bales rather than within lots, we have designed our 100-bale blends to contain a minimum of four distinct lots. At any given time, we maintain at least three lots in the warehouse with 25 bales in one lot, 50 in another and 75 in the others. Then, when a new lot of 100 bales arrives, we pull 25 bales from each of the four, thus maintaining our imbalanced stock of original bales.

What Are The Results?

Since fiber fineness is one of the easiest as well as one of the most important properties to check, we made a study of variation in fineness within our picker laps. Results showed the mill's coefficient of variation of Micronaire at the pickers dropped from 4.49% to 2.45% based on 100 laps of unblended stock versus 100 laps of preblended cotton.

Tests have revealed no loss in fiber length and strength. These data are further confirmed by our combers which did not detect short staple, ends-down at spinning which actually decreased, and especially by the amount of clearer waste which we have measured to be 7% less on preblended cotton than on unblended stock.

Smaller tufts and uniform density have long been a goal in the opening room and at carding. There is no doubt that we have attained this goal, and it has been reflected in more uniform feed from our opening room hoppers and in fewer reject laps. Nep counts showed a 12% reduction in neppiness after entrance of preblended stock. This is felt to be due to the smaller tufts allowing finer fibers to be dispersed reducing their tendency to mass together.

Fluorescent streaks on cones of yarns after winding had plagued us in spite of what appeared to be sufficient doubling. Larger opening room blends helped but we didn't really eliminate this until we went all the way in preblending.

A limited test shows a 20% reduction in ends-down in

Howe, Hembree, Fiori

Speakers at the third technical session included David E. Howe, The American Thread Co.; Joel Hembree, Otto Goedecke Inc.; and Louis A. Fiori, S.R.R.L.

Bogdan, Platt, Miller

Speakers at the fourth technical session included: John F. Bogdan, North Carolina State College; Louis Platt, Saco-Lowell Research Center; and A. L. Miller, S.R.R.L.

the spinning room. General observation definitely confirms a better spinning room, with far less day-to-day variability. Yarn strength has not been significantly affected on the average but there has been less fluctuation from week to week. An analysis of yarn strength before and after preblending showed a 9.4% reduction.

Cost Of The Program

The "out-of-pocket cost" of the equipment for preblending totals $30,000. Operating costs are 0.165 cents per pound of cotton processed and, of course, there is an added overhead expense. Offsetting the total, small as it is, is the direct saving in spinning relative to ends-down. Other savings which cannot be measured as accurately but which are probably more significant include better cleaning, reduction or elimination of redyes, fewer rejects in our own mills, virtual elimination of color problems in our own mills and from customers, and the untold advantages in buying and storing of cotton within a crop year and even more so at a crop change.

The Continuous Flow Cleaning Line

By LOUIS PLATT

Saco-Lowell Research Center

REASONS for the growing concern regarding the adequate cleaning and blooming of cotton over the past years were reviewed in this paper. The internal and external pressures on the textile industry to become more competitive have resulted in the advent of short-cut processing, higher production and the lowering of the cotton mix. Looking at opening and picking now, in relation to the rest of the mill, it is likely that we will find that the difference is as great as that between a Model A Ford and one of the 1959 automobiles. Opening is sometimes regarded simply as a necessary evil.

Pickers which originally ran from 250 to 320 pounds per hour have been stepped up to 350 to 450 pounds per hour and asked to do just as good a job. The production increase nets lower efficiency of trash removal and complaints of dirty laps made by the card room. The average mill's answer to this was to put additional cleaning machines in the line to remove more trash. This resulted in degradation of the cotton staple, increase in neppiness, and curling of the cotton, which all throw additional work on the cards. High production cleaning machines, even though more efficient, are not the complete answer to the problem.

We have approached the concept of an opening and cleaning line using a low production, high efficiency, flow line method. It is our belief that this method will process cotton with a higher cleaning efficiency, lower beater action and staple degradation. It will result in a cleaner, more even lap from the picker than has hitherto been possible. We will soon be able to offer a complete new opening and picking line designed around these ideas.

No. 15 Opener

The first machine in this line will be the No. 15 opener-cleaner of which there are hundreds in mills all over the world. This machine did such a good job that, recognizing the capabilities of cleaning and opening the cotton at low production, we designed another machine to follow in sequence; namely, the No. 17 opener-cleaner. Results of mill tests of the No. 17 have surpassed the company's expectations for the unit. When the No. 17 and No. 15 are coupled to an F-7 feeder, exterior appearance is that of one machine.

Low Production Flow

In the low production flow line the stock is opened at the beginning and progressively opened to the individual fiber if possible. There is no consolidation of the stock in the reserves of feeding systems until it reaches the reserve preceding the finisher section of the picker. At this point constant density and not volume will lead to a more regular and even lap. Progressive opening with a minimum of beating is essential.

It may appear that with the greater number of low production machines the capital outlay would be higher. However, consideration must be given to the fact that the more expensive high production machines will be eliminated, so that a complete low production flow line will differ little in cost. A new installation would probably cost less than a conventional opening and picking line.

Design Of The S. R. R. L. Granular Card

By A. L. MILLER

Southern Regional Research Laboratory

THE new method of carding without flats has been called granular carding. (See TEXTILE BULLETIN, April

1959, P. 63) It gets its name from the inside surface of the card top, which is covered with granules. The granular card conversion is complete with the addition of a pre-opener roll and a low-pressure lickerin cover.

The four top plates covering the cylinder are made of rugged aluminum casting. The surfaces are finished to the same tolerance as a flat bar. Since the plate is structurally stable and rigidly mounted, settings of 0.005-inch are recommended and can be easily maintained. The quality of the sliver improves with the closeness of the setting.

The granular surface on the plate is a coated fabric material with a pressure sensitive backing and is made by the Minnesota Mining & Mfg. Co. This material has the desirable quality of not loading with fibers and therefore requires no cleaning or attention whatsoever. The effect of the granule size on nep count and yarn strength was found to be statistically significant. Differences are small within the recommended range of 60 to 100 granule size.

With a little practice a plate can be covered in less than ten minutes. When the material becomes worn, it is removed by lifting one corner with a knife blade and pulling it off. The plate is left clean and ready for another application of granular material.

Advantages of the S.R.R.L. card conversion are: (1) A savings in waste of 2 to 4% is obtained and handling of waste is reduced by eliminating the flat strips. (2) A reduction in repair costs and parts inventories should result by changing from a complete moving mechanism to a simple stationary one. (3) A reduction in weight of about 800 pounds is realized. (4) A reduction of power requirements of 100 watts (about 20%) results with the removal of the flats. (5) The sealed top of the card is a major step in the elimination of dust in the card room. (6) The smooth finish of the card has a neat appearance and simplifies good housekeeping. (7) The design of wider cards is made practical where the need exists.

A package conversion for the cotton card is now available which eliminates flat waste and decreases processing costs. While results appear favorable from limited laboratory and mill evaluations, the granular card is a radically new device and much remains to be learned about this development.

Preliminary Mill Evaluation Of The S. R. R. L. Granular Card

By G. P. CALLAWAY
Avondale Mills

THIS paper is a report on the manner in which the new granular card performed in Avondale Mills. The results of various tests shown here is tabular form.

Waste Test Results
Test No. 1

	S.R.R.L. Card		Conventional Card	
	Pounds	Percent	Pounds	Percent
Pounds Fed	107.187		107.187	
Sliver Delivered	104.938	97.90	103.813	96.85
Motes And Fly	1.937	1.81	1.687	1.57
Sweeps	.188	.17	.250	.23
Flat Strips			1.313	1.23
Invisible Loss	.124	.12	.124	.12

Waste Test Results
Test No. 2

	S.R.R.L. Card		Conventional Card	
	Pounds	Percent	Pounds	Percent
Pounds Fed	160.438		157.625	
Sliver Delivered	157.063	97.89	152.375	96.67
Motes And Fly	2.813	1.75	2.313	1.47
Sweeps	.438	.27	.438	.28
Flat Strips			1.938	1.23
Invisible Loss	.124	.08	.561	.36

Shirley Analysis Test Report For Card Sliver

	Weight Fed (Grams)	Lint Delivered (Grams)	Visible Foreign Matter (Grams)	Invisible Loss (Grams)	Total Invisible & Visible Loss (Percent)
S.R.R.L.	100.0	98.4	.7	.9	1.6
Conv.	100.0	98.8	.5	.7	1.2

Card Data

	Neps/100 sq. in. (Avg. 100 counts)	Sliver Wt. (gr./yd.)	Uster % Var.
S.R.R.L.	30.9	57.8	2.76
Conv.	29.3	59.5	2.14

Drawing And Roving Data

	Drawing Sliver		Roving
	Uster % Var.	H.R.	Uster % Var.
S.R.R.L.	2.27	.69	6.6
Conv.	2.13	.68	6.5

Yarn Data

	Break	Count	Break Constant	Uster % Var.
S.R.R.L.	138	14.2	1960	16.0
Conv.	131	14.5	1900	16.0

Callaway reported ends-down-per-thousand-spindle-hours were not included in the report because the production from a single card could not be considered conclusive. The mill has received three additional granular card conversions and plans further evaluation of the units under mill conditions.

Cotton Buyers Meeting Held

Cotton buyers representing textile companies in four Southern states met in Atlanta, Ga., May 20-22 for the largest gathering of its kind in history, according to Frank L. Carter, secretary of the Georgia Textile Manufacturers Association. The meeting consisted of individual annual meetings of buyer groups from Georgia, Alabama and North and South Carolina, Carter said. In addition, several joint sessions of all the state groups were held. The cotton buyers attending the meeting represented 90% of the U. S. cotton textile industry, according to Carter. He estimated attendance at approximately 500 persons, including representatives of other segments of the cotton trade and of the textile waste industry.

D. P. Cook Jr., West Point (Ga.) Mfg. Co., chairman of the cotton buyers division of the Georgia Textile Manufacturers Association, presided over the joint sessions and the Georgia group served as administrative hosts for the meeting. Principal speakers for the two-day program were Robert C. Jackson, executive vice-president of the American Cotton Manufacturers Institute, and Clifton Kirkpatrick of the National Cotton Council.

#3 in a series reviewing the "reasons-why" for the consumer acceptance of Arnel

ARNEL'S "STAMPS" OF CONSUMER APPROVAL

Mill men don't have to be sold on the importance of quality performance. It's woven into the business of textile manufacturing.

So too with consumers. They welcome the "quality assurance" implicit in proper fabric identification. Arnel tags, labels, folders and advertising are consumer assurances of performance claims—backed by thorough and consistent testing procedures.

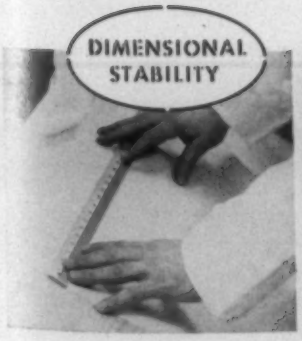
What makes the Arnel triacetate CERTIFICATION program so meaningful to the consumer? Briefly, the answers are:

1. Fabrics identified with the official Arnel hang-tag, or supported by advertising or promotion must be tested beforehand.
2. These fabrics must meet the Celanese minimum requirements for: Fume Fading, Lightfastness, Colorfastness to Laundering, Tensile Strength, Tear Strength, Perspiration, Crocking, Seam Strength, Seam Efficiency, Safe Ironing Temperature, Ease-of-care and Dimensional Stability Characteristics, Abrasion, Pleatability.
3. In addition, dyers and finishers regularly send in samples of fabrics from their various dyelots, and these are also tested in order to make sure that the original quality is maintained in succeeding batches.
4. Arnel tags provide to the consumer all important information concerning the fabric as well as its care. Service qualities *must* be verified.

So take advantage of the great consumer acceptance of Arnel. Let Celanese work with you to develop new Arnel fabrics. Booklets 12A, 13A and 14A, containing the important technical procedure and facts about Arnel, are available by writing Celanese Corporation of America, Box 1414, Charlotte, N. C. Celanese® Arnel®

District Sales Offices: 180 Madison Ave., New York 16, N. Y.; Room 10-141 Merchandise Mart, Chicago 54, Ill.; Western Merchandise Mart, Room 478, San Francisco, Calif.; P. O. Box 1414, Charlotte 1, N. C.; 200 Boylston St., Chestnut Hill 67, Mass.; 3179 Maple Drive N. E., Atlanta 5, Ga.
Export Sales: Amcel Co., Inc. and Pan Amcel Co., Inc., 180 Madison Ave., New York 16, N. Y.
In Canada: Chemcell Fibres Limited, 1600 Dorchester Street West, Montreal, Quebec

Arnel . . . a



ARNEL*

*This is the official Arnel symbol—evidence that this fabric of this new triacetate fiber has been pre-tested for performance claimed.

Celanese contemporary fiber

Teaching Quality Control To Mill Personnel

By PAUL D. BROWN*

THE School of Textiles at Georgia Tech is currently operating at 40% of capacity; Clemson's textile school is operating at 50% of capacity; and North Carolina State 55% of capacity. Numerous and excellent papers have been presented at various meetings and clinics of our industry descriptive of, and with qualified opinions why, our textile schools are not operating at capacity enrollment. Some of the reasons most frequently heard that are believed to have influenced young men to enter other fields are:

(1) Lack of research;
(2) Lack of vision;
(3) Over production;
(4) Under consumption;
(5) High costs;
(6) Low prices;
(7) Poor market research;
(8) Need to generate increased public respect.

Of all the reasons given, the last one mentioned is, in my opinion, one of the most important. To attract young men and fill our textile schools, our industry must generate public respect through an atmosphere of real progressiveness. The spotlight in textile education, however, has been focused on institutions of higher learning. I think that in-plant training and education of people we already have has not been given the attention and time such a program deserves. Few will disagree with the statement "The greatest asset our industry has is its people." Who is better qualified to sell our industry and generate increased public respect than our people?

Upgrading through education and training the people we already have would create an atmosphere of progressiveness and help cultivate the best ambassador the industry has, our people. One of the attributes of a line or department supervisor should be and is, in most cases, the ability to teach and share information. However, it would be folly for us to believe that all of our supervisors possess this most important attribute. In fact, some of our industry's supervision are excellent technicians and analysts but are most definitely limited in the ability to convey this information in a constructive and every-day manner to the people who need to share his knowledge and execute it into something tangible. Also, there is an element of traditional possessiveness in our industry that is a detriment to progress.

For all of these reasons no industry in the U. S. today has a greater job cut out for it in the educational and training field than the textile industry.

Some textile companies have excellent training schools and well qualified instructors. Unfortunately, however, these training schools are not industry-wide and are mostly confined to the larger companies. Perpetuated courses of training and teaching in general with any degree of continuity is practically non-existent in some of our companies.

Choose if you will, at this time, some high school graduate who came with your company, say as an example, two years ago. What in the way of training other than special instruction in the particular job he was hired for, has your company given or offered this employee?

Let's assume this employee to have been hired for the job of machinery serviceman. How many years without some classroom training do you think it will take this young man to, in effect, "pick-up" basic and fundamental knowledge about the manufacturing of textiles. Chances are, without the leadership, interest and encouragement from those of us in management he will melt into a category of complacency and confusion.

The question arises, I am sure, as to why we should spend time and money to orientate a serviceman in textile manufacturing when we already are receiving a day's work for a day's pay. The answer to this lies in the thesis of broadening and upgrading those we have to create a more progressive and forward outlook in those people who are the most important salesmen we have.

Since the 1930's, a great, if gradual, change has taken place in our industry. Due to compulsory education, military training and other factors, our people are more receptive and capable of receiving information than ever before. It may be true that 20 years ago our people were not ambitious, generally, to the extent of wanting to be taught, with the exception of cases where it was known that a promotion was in the offing. By contrast, today we have inquisitive and better educated young people who want to know, in effect, what makes our industry tick. The "old school" is rapidly fading out. Are those of us in management prepared to grasp the initiative with a dynamic new approach through education?

The question could be asked if "grass root" education would not, in effect, be an advocacy of paternalism. If paternalism has ever existed, as we have been accused, it would have been in the realm of social welfare and religion rather than vocation. Many years ago by necessity, due to water supply, availability of land, etc., some textile plants were built somewhat isolated and remote from what could be called beaten paths. Under those conditions it was inevitable that a colony or sort of collectiveness, which integrated social life, religion and vocation, would come into being. Management had no choice but to accept leadership, in some cases, of all three.

The grandson and great grandson of these early textile people are your present textile employees. He is much better educated, more individualistic and has a strong desire to think for himself.

In the field of vocational education, we have been the least paternalistic. If we are, in some aspects, a second rate industry, I think a more concerted vocational training program years ago would be paying dividends today.

*Virginia Mills Inc., Swepsonville, N. C.

North Carolina and other Southern states will not always be predominantly textiles. We have already such names as Western Electric, Douglas Aircraft, Westinghouse and other big names in American industry. These people for years have believed in and practiced grass root training. Some of us, possibly already are feeling the pinch of competition in the labor market.

In textiles we usually wait until some young prospect "sells himself" to us as having a good potential for managerial responsibilities. In effect, it is up to him to take the initiative in self-improvement through correspondence courses, reading trade journals and other means. He gets little or no training until he has distinguished himself from the group.

By contrast some other industries consider the potential, inherent in all young blood once he has passed their selection requirements for employment, and immediately take the initiative through education, to cultivate the potential. As you know, a big segment of our mills do not invest in training proportionate with earnings. For many years, the lion's share of textile training and upgrading has fallen on the shoulders of a few companies. It may be good business to let somebody else train them and then hire them; however, if such a philosophy exists, the greatest asset we have—people—is not being utilized.

A great and long needed step forward in vocational training is on the threshold of being a fact. I refer to the regional and county vocational training schools being established in different parts of the state of North Carolina. My home county, Alamance, and the city of Burlington have been fortunate in securing one of these schools. These schools are intended only to supplement textile education. As an example, the planned curriculum for the school in Alamance County is:

(1) Machine shops;
(2) Auto mechanics;
(3) Blueprint reading;
(4) Electronics;
(5) Sheet metal;
(6) Refrigeration;
(7) Heating;
(8) Industrial chemistry;
(9) Looping;
(10) Knitter fixing; and
(11) Weaving.

For all of these subjects, a total of eight shops have been allotted. Three of the eight, or 37.5% of the total shops, will deal directly with textiles. The population of Alamance County is 82,000, some 19,000 of which are employed in industry. Thirteen thousand, or 68.42%, are directly employed in textiles. Assuming that one textile job supports three people, 39,000 or 47.56% of the total population derive their livelihood directly from textiles.

The school can graduate a total of 1,000 per year. This estimate is based on an average number of hours per course, some of which will be three months in duration. Of the total, 375 will be textile graduates. Estimating approximately 15% of the textile students to be high school juniors and seniors, this leaves a total of 319 textile employees, or 2.45% of Alamance County's textile work force who could be taught in one year.

As of last November, the total number of people employed directly in the textile industry excluding the cutting

trade, in North Carolina, was 66,412. As of now, a total of nine vocational training schools throughout the state, are under construction or planned. Assuming the curriculum to be comparable to Alamance County's, these nine schools could teach a total of 2,871 or 4.32% of North Carolina's textile employees.

On whose shoulders does responsibility for upgrading and broadening the remaining 95% of our labor force fall?

Seeing an obvious need for textile training through the years, I decided about two years ago to try and contribute something more than analytical philosophy. Consequently, I devised a training course and labeled it "Textile Quality Control." Working with and through the North Carolina Department of Public Instruction Division of Vocational Education, I have taught textile quality control to supervisors of six different companies in Alamance County. I have seen, firsthand, a good cross-section of our department heads and supervisors. I have been most favorably impressed with the eagerness of these supervisors to participate and receive information. The need to be taught was even more apparent.

I have seen card room supervisors who have processed millions of pounds of cotton and literally had no idea what Micronaire means. I have seen a look of astonishment when told that a cotton fiber is ribbon-shaped rather than cylindrical. One of the most amazing deficiencies found was the inability to distinquish between Z and S twist yarn. Having seen gross deficiencies in our supervision, who then will teach the serviceman in automatic quilling? Test your own supervisors. You will probably be surprised.

The approach of the course has been on a basic and fundamental type of quality control rather than statistical and analytical. The average supervisor will be unresponsive to a course in quality control bordering on research. An outline of the course appears in the following paragraphs:

First Session—Two Hours

(1)—Introduction and resume of instructor's background. Give a short outline of what course consists of and what to expect in future sessions.

(2)—Write on blackboard the following: "Desired Quality Is Never An Accident."

(3)—Solicit group for reasons why desired quality is never an accident.

(4)—Write on blackboard response from group and discuss.

(5)—Write the following opinion of why quality is never an accident and correlate response from group. "It is always the result of high intentions, sincere effort, intelligent direction and skillful execution."

(6)—Explanation of cotton fiber nomenclature; Micronaire, characteristics identified with regions, dyeing characteristics and grading methods.

(7)—Study of man-made fibers, their components, methods of manufacture and characteristics such as their affinity for different dyes, etc.

(8) Study of dyestuff such as qualities of vat versus sulphur or direct versus naphthol, etc.

Second Session—Two Hours

(1)—Analysis of description (using actual samples) of both natural and synthetic yarns.

(2)—Basic study of fabric construction with each member participating using draft paper.

(3)—Give each member a blank piece of draft paper and ask that they put x's in squares and bring to the next meeting.

Third Session—Two Hours

(1)—Ask members to copy their drafts on blackboard.

(2)—Describe and discuss type of weave created.

(3)—Continue this with other members for approximately one hour and discuss.

(4)—Study and explanation of jacquard head versus dobby or cam.

(5)—Study and analysis of fabric imperfections using samples.

Fourth Session—Two Hours

(1)—Continuation of fabric imperfection study using J. B. Goldberg's book, *Fabric Defects,* as text. (Case histories of imperfections for about one hour.)

(2)—Study and discussion of mechanical and human errors responsible for fabric imperfections commencing with pickers.

(3)—Ask some one from carding department to come to blackboard and list all causes, known to him, that could result in sub-standard laps. After having done this review what he had written on blackboard, item by item, and inquire as to ways and means of helping to control each item.

Fifth Session—Two Hours

(1)—Continuation of ways and means of controlling quality at various manufacturing points (group participation).

Sixth Session—Two Hours

(1)—Same as fifth session.

Seventh Session—Two Hours

(1)—Study of fabric grading: (a) point system; (b) major and minor; and (c) statistical.

(2)—Draw hypothetitcal examples of an unclassified piece of cloth 100 yards in length on the blackboard and place hypothetical defects through the piece.

(3)—Ask members of group to classify the piece of cloth.

Eighth Session—Two Hours

(1)—Continuation of hypothetical examples as in seventh session.

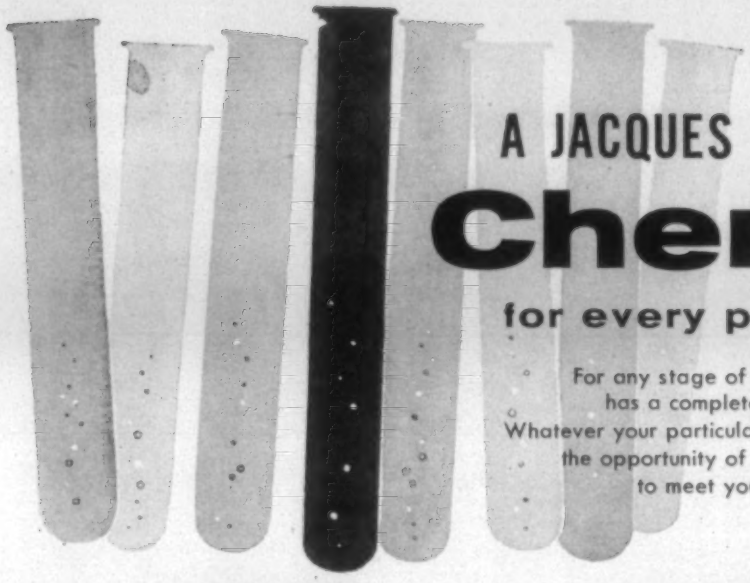
(2)—Study and discuss a 12-point program for establishing and conducting a quality control department.

(3)—Explain and discuss Worth Street Rules and their relation to the manufacturer.

(4)—Explain and discuss arbitration procedure emphasizing, however, that if you win you lose.

Conclude:

(1)—Quality control of raw material.
(2)— " " at the picker.
(3)— " " " the card.
(4)— " " " breaker and finisher drawing.
(5)— " " " slubbers.
(6)— " " " spinning frame.
(7)— " " " winder or spooler.
(8)— " " " warper or beamer.
(9)— " " in the dyehouse.
(10)— " " " the slasher room.
(11)— " " " the weave room.
(12)— " " " the cloth room.



A JACQUES WOLF Chemical for every processing need!

For any stage of textile processing, Jacques Wolf & Co. has a complete line of chemicals and specialties. Whatever your particular problem, we shall welcome the opportunity of submitting samples custom-formulated to meet your needs. Write for our catalog.

HYDROSULFITES

HYDROSULFITE AWC—($NaHSO_2CH_2O.2H_2O$)
For stripping and discharge printing.

HYDROSULFITE OF SODA—(Conc.) ($Na_2S_2O_4$)
For reduction of vat colors. Non-Dusting.

HYDROSULFITE B Z—($Zn(OH)HSO_2CH_2O$)
For stripping wool stock, shoddy, rags.

HYDROZIN*—($ZnHSO_2CH_2O)_2$)
For stripping acetate dyes and discharge printing on acetate dyed grounds.

HYDROSULFITE QD—For rapid dissolving in continuous vat dyeing.

DE-SIZING

AMPROZYME*—For liquefaction of starches and proteins in de-sizing textiles.

DIASTAZYME*—Used as an economical de-sizing agent for starch-sized textiles.

SCOURING

ORATOL L-48*—A synthetic detergent with excellent penetrating and emulsifying properties.

BENSAPOL—A liquid detergent derived from Monopole Oil particularly useful for scouring wool.

LOUPOLE W-950—A pentrating detergent for use in scouring or boiling off.

PARNOL—Sodium Dodecyl Benzene Sulphonate.

SELLOGEN GEL—A synthetic detergent used also in dyeing and as a wetting agent for all natural and synthetic fibre.

DETERGENT W-1750A—Has anionic and non-ionic properties; excellent for scouring nylon and dacron to remove throwster sizings; penerates and lifts graphite streaks.

DYEING

WETSIT CONC.*—A synthetic aromatic compound for wetting out in both the dyeing and scouring operations.

WETSIT NI—100% non-ionic wetting agent.

MONOPOLE OIL*—A highly concentrated, double sulphonated castor oil for a wide range of operations.

APASOL*—Particularly effective in the dispersion of acetate printing colors. A sulphonated ester with a high combined SO_3.

LOMAR PW*—Dispersing agent for pad dyed vat colors; also retardant in the dyebath.

SULPHONATED OILS—Castor, Cod, Sperm, Olive, Neatsfoot, Pine, Red, Teaseed, etc.

FINISHING

ACETATE OF ALUMINA—Water-clear solution, sulphate and iron free; used for waterproofing.

ALUMINUM FORMATE—For waterproofing; clear, water-white, stable; sulphate, chloride and iron free.

LUPOSEC—Stable emulsion of mineral waxes with aluminum acetate. For one bath method of waterproofing.

STATLESS—Paste for reducing static on all fibres.

CHEAM SOFTENERS—In different strengths and varied degrees of alkalinity for a soft full hand to all types of fabrics.

LUPOMIN*—A series of cationic nitrogen compounds used for softening and finishing textiles.

CHAFE REMOVER W-545-T—A finishing oil for textiles, particularly silk fabrics, to remove chafe marks.

LUXAPOLE W-1054-B—A superior, sulphonated oil for finishing all fine fabrics.

OIL S-261C—A clear, amber oil used as a penetrator and softener for cotton cloth; aids in uniform shrinkage.

SOLUBLE WAX JB—A dispersed vegetable wax for full body and high lustre to cotton goods.

WEIGHTER FINISH M—For heavier body and better hand for all fabrics.

PRINTING

SUPERCLEAR*—Prepared from natural gums as a thickener for printing all types of textiles.

SUPERGUM—A cold-water soluble gum.

PIGMENT WHITES—Dispersed suspension of white pigments with plasticizers for use on light grounds, or white discharge on dyed ground shades.

ACETATE OF CHROME—As a mordant in dyeing and printing mordant colors. Also for dyeing mineral shades.

TRAGACANTH—Gum solutions in various concentrations for extra clear, sharp prints when used with acid, direct or insoluble Azo dyestuffs.

OTHER SPECIALTIES

Mordants	Gums—Arabic, Karaya and Tragacanth
Defoamas	Fiber Lubricants
Sizes	Thickeners
Defustres	Wool Oils
Penetrants	Sulphonated Oils (Various Bases)
Weighting Finish	

JACQUES WOLF & CO. Chemicals PASSAIC, N. J.

*Reg. U.S. Pat. Off.

Guaranteed

Let This Front Roll pay EXTRA DIVIDENDS on your spinning...

Enduring dependability is a designed-in quality of every Dixon Engineered Changeover, best illustrated by our patented, self-aligning front roll. Here indeed is superior design which will produce superior performance and *fast pay-back* in your mill, as it has in other competition-conscious mills* throughout the country.

1. Dixon Front Roll bearings are made from high carbon steel, races and balls hardened, ground, and polished. Here's top quality that can carry a real GUARANTEE.
2. Dixon Front Roll deep groove bearing is pre-lubed — NEVER NEEDS RELUBRICATION!
3. Dixon Front Roll contact-seals hug the races—stop lint, hold grease.
4. In Dixon Front Roll, the inner bearing race rotates — travels less distance — bearings last longer.
5. Dixon Front Roll cots are heavy-walled — give maximum load-carrying ability, permanent bond to arbor, and additional cushioning.
6. Dixon Front Roll cots are synchronized. They're easier to strip, and need no special buffing or repair equipment.

Best of all, the Dixon Front Roll is the quickest and lowest cost way to start your full Saddle Guide Changeover program. By installing self-aligning Front Rolls and Saddles and eliminating front cap bars, you remove immediately a major source of lubrication and cleaning. You reduce ends down and improve evenness. You're also well on your way to a complete oil-free and cap-bar-free center-suspension changeover.

Ask for our detailed report showing how an actual Dixon Engineered Changeover installation paid for itself in 25 months and is now saving $1.50 per spindle per year. **Dixon Corporation, Bristol, Rhode Island.** Southern Sales: Dunson & New, Inc.: Box 9202, Greensboro, N. C.; Box 321, Greenville, S. C.; Box 445, West Point, Ga.

*To mention a few

Mill	Spindles	System
American & Efird Mills, Inc.	31,078	Double Apron Casablancas
Johnston Mfg. Co.	20,756	Double Apron Casablancas
Carlton Mills	100,504	Double Apron Casablancas
Chicopee Manufacturing Corp.	272,032	Double Apron Roth and Casablancas

Dixon

Engineered devices for weighting and guiding top rolls since 1876

Why Modernize Spinning?

By ROBERT RULON MILLER, President, Dixon Corp., Bristol, R. I.

THERE is no industry more cost conscious than the textile industry. The healthy attitude of "getting the best for the least money" has been developed from keen inter-mill competition. The cost consciousness of mills has carried over to the textile machinery manufacturer.

As a result, the textile mills today have a wide price range to choose from when shopping for new or modernized machinery. They have a greater number of manufacturers to bargain with than ever before in history.

Since 1876, Dixon Corp. has been designing and manufacturing engineered devices for the drafting elements of spinning frames. Except for token competition in the drafting changeover field, up until 1945, Dixon was one of only four concerns involved in this work. Today, at latest count, we have ten very active competitors selling in the U. S., many of whom are offering a good changeover product to the industry. This is a healthy thing for the mills considering changeovers. Perhaps surprisingly, we consider it a healthy situation for Dixon Corp. Never have we had so much competition, and during this competitive era of the past five years, both our sales and our products have greatly improved.

Our increase in sales and our product improvement has doubtless been encouraged by strong, vigorous competition. Accordingly, we — and others — have spinning drafting changeovers that are priced and designed so that mills cannot afford to put off modernizing. For instance a greige goods mill in Georgia was able to cut costs, save hours, and resultantly *save dollars!*—by changing over its Roth single apron drafting to a Roth double apron system. In 25 months, this mill paid for its total material and installation cost, $30,248, and is now saving $1.50 per spindle per year on this investment. This saving does not include the lowered costs in the card room due to making larger roving to accomplish the higher drafts obtainable with modern changeovers.

The savings are purposely illustrated in this way to more forcibly drive home this point—Even a mill with obsolete roving frames, not immediately able to take advantage of longer drafts, can install spinning changeovers and pay back their investment promptly with only spinning room savings. These savings come from less frequent cleaning, elimination of all lubrication of top rolls, and reduced roll laps and ends-down. Such improved operating performance assures better yarn quality. New changeovers also increase breaking strength, improve evenness and reduce size variation.

A complete changeover, including top and bottom rolls, roll stands, gearing, cradles, cots, aprons, weighting, etc., can cost from $6.75 to $9.00 per spindle, depending on the frame, gauge, etc. This compares to from $45.00 to $65.00 or more per spindle for a new frame.

One major consideration mill management is faced with is what to start with on a modernization program in spinning. Should it be spindles or spindle drives, vacuum collection, overhead cleaning, creels, drafting, or rings and so forth? The answer to this question must, of necessity, be made in conjunction with the individual mill problems. However, certain investments are interdependent on others. Dixon offers drafting changeovers that can be purchased in installments. The mill orders only the parts of a changeover that will fit into and be necessary for the full saving potential of other modernization work. At a later date, the changeover can be added to, and eventually completed, no purchased parts being discarded. The final changeover installed in this manner will be the most modern—completely oil-less and cap-bar-less.

For example, a mill may wish to modernize or purchase new roving to process larger packages. Part of the potential savings must be realized by longer drafts in the spinning room. Should the mill be unable to afford a complete spinning changeover, it could install new oil-free middle top rolls, aprons and cradles. Thus, with a minimum of expense, their old frames can have drafts from 20 to 50. Such a minimum changeover can cost less than $1.75 per spindle.

Another example—a mill wants to install vacuum ends-down collection. Such systems are not 100% efficient unless lubrication is eliminated from the front top roll. Oily

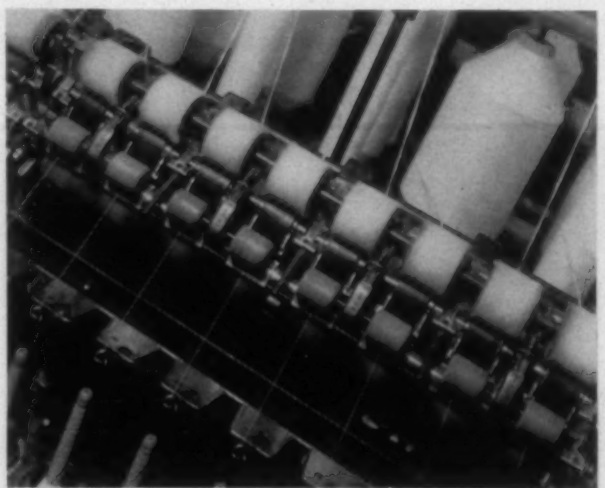


Fig. 1—The Dixon Corp.'s self-aligning front roll and saddle combination installed on Casablancas drafting element.

waste can get into the suction system and materially decrease its effectiveness. In this case, Dixon would advise a mill to initially purchase the self-aligning front top roll assembly (see Fig. 1). This part of the drafting element eliminates front cap bars and front roll lubrication, making the vacuum collection system fully effective. The unique front roll-saddle combination assures perfect alignment of top and bottom rolls, which will decrease ends-down and lap ups. At a later date, the other elements can be added and the changeover completed when the customer wishes to make the further investment.

The construction of the Dixon front top roll (Fig. 2) is unique in the industry and its simplicity belies its effectiveness. The single ball bearing on the central arbor is hardened, ground and polished. It is made from special steel to withstand the rigorous service required of it (Fig. 3). Other anti-friction rolls have from two to six individual bearings. All of these rolls utilize the roll arbor as the inner race of the bearing. Roll arbors are made on automatic screw machines, which must use special soft screw machine steel. This steel will not harden in the same way bearing steel will. In addition, numbers of bearings are not indicative of roll life (Fig. 4). Rolls with bearings under the cots must, of necessity, have very small bearing elements, whether they be balls, needles or rollers. The size of these elements is directly proportional to their load carrying capacity.

Miniature anti-friction bearings are very difficult to seal from lint. Multiple bearings mean multiple tolerances and roll run-out increases. The large single Dixon front roll bearing is held to a run-out tolerance of .0003". It is mounted on a boss ground on the roll arbor. This boss is held to the same run-out tolerance. The maximum total mathematical run-out of this construction is .0006", the lowest run-out of any top roll on the market.

Plastic Bearings

Many other improvements are incorporated in top rolls, such as plastic bearings like "RULON"® used by the three oldest manufacturers, and plastics like nylon used by two other manufacturers. These materials are normally for back rolls, both top and bottom, or cradles.

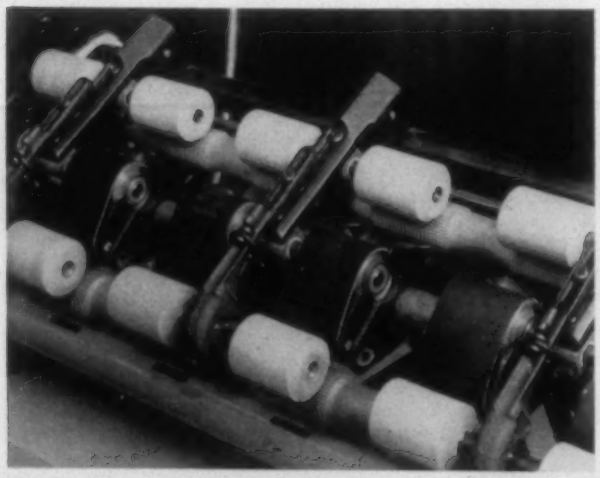


Fig. 2—Dixon's double apron Casablancas Super Saddle Guide changeover.

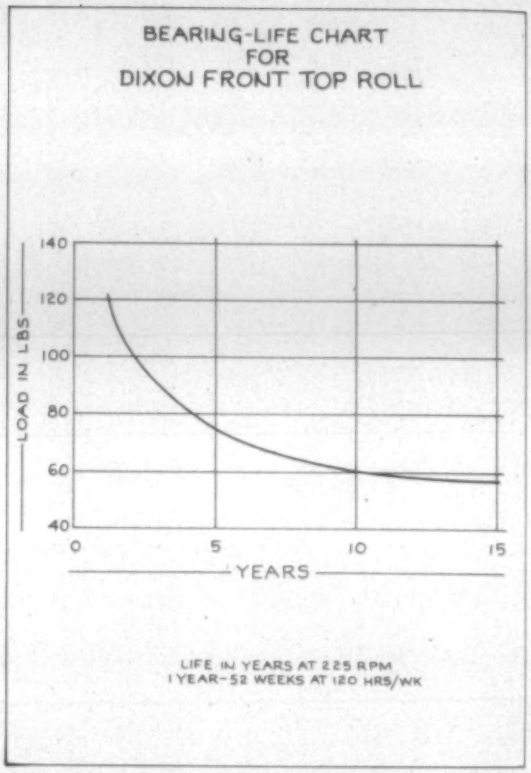


Fig. 3—At 60 pounds pressure, the bearing life is ten years. Actual pressure on the spinning frame is about 35 pounds, leaving a safety factor of nearly two-to-one.

There has been much discussion—pro and con—concerning the merits of individually turning front roll bosses versus bosses that turn together as a synchronized unit. There should be no disagreement in either school, however, in the statement that the three top drafting rolls should all be uniform—either all individually turning bosses or all synchronized bosses. Most changeovers mix the two types, which is inconsistent and robs the system of the full advantage each type has.

All of the Dixon top drafting rolls—front, middle and back—have synchronized bosses. This arrangement assures each boss will rotate at the same speed; therefore each spindle will receive the fibers at the same rate and the yarn will have the same draft and twist.

Proponents of the individual turning bosses argue that each end from a set of top rolls is independent. Should a slub, doubling, singling, or other variation occur in the roving, only the end with the variation is affected. The other end, being non-synchronized, runs as normal.

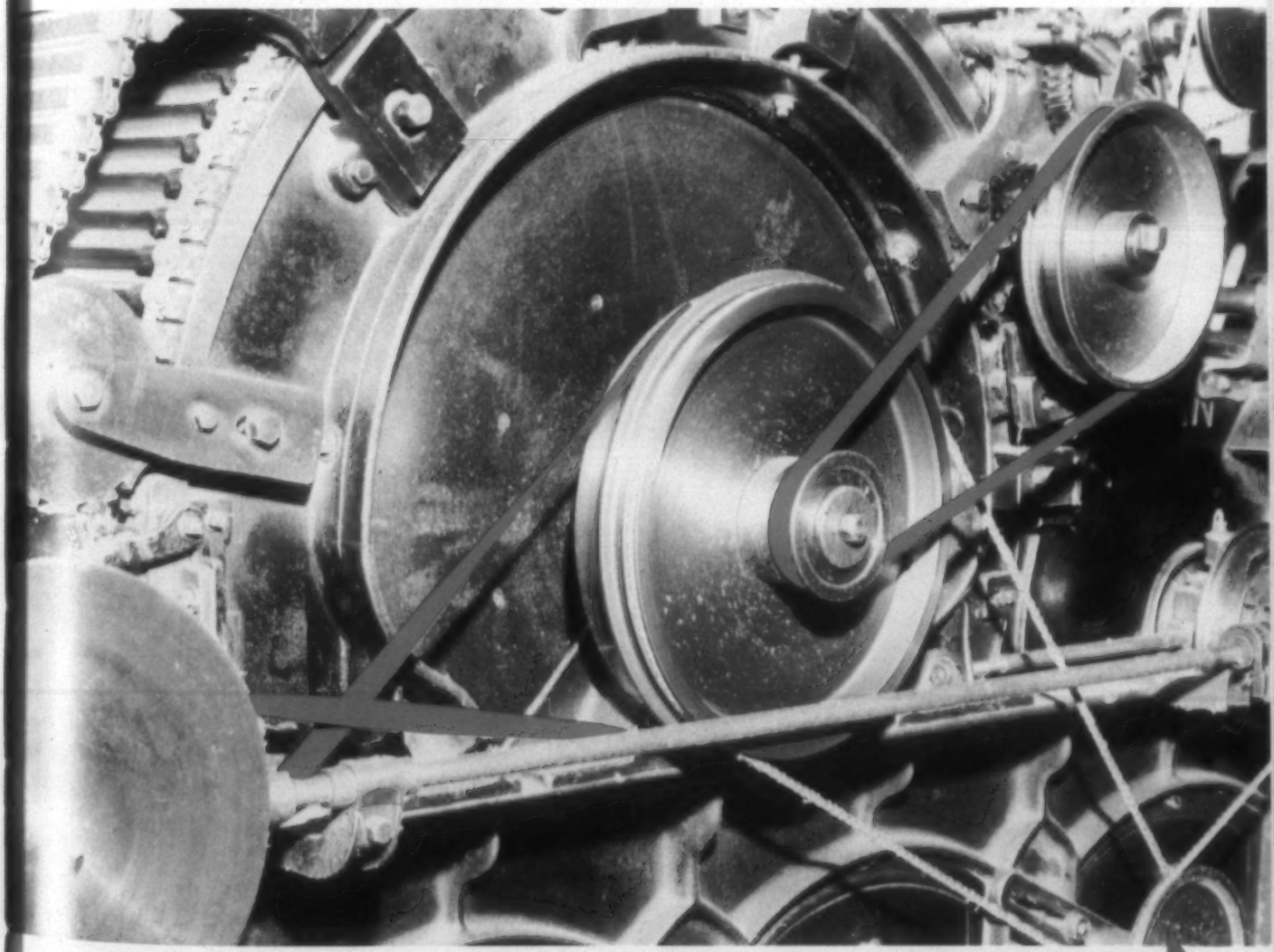
Both synchronized and non-synchronized top roll bosses have advantages. It seems obvious that a mixture of the two types is inconsistent and accentuates the disadvantages of each.

For years, Dixon Corp. has preached to the industry that at best, top roll saddles are always a brake on rolls. The correctly designed roll-saddle arrangement makes this braking action as inefficient as possible. With the advent of magnetic top roll weighting, another manufacturer has joined us in this same assumption. Until 1948, the central arbors of top rolls were made in two diameters only. One original equipment manufacturer always used ½-inch diameters, and the other two used $\frac{9}{16}$-inch diameters. In 1948, Dixon Corp. made the first top roll with an arbor

FOR
INCREASED
TEXTILE
MILL
EFFICIENCY

EXTREMULTUS

THE BELT THAT WON'T STRETCH... WON'T SLIP



THE BEST DRIVE AT THE LOWEST COST!

SEE ACTUAL ON-THE-JOB PHOTOS INSIDE!

EXTREMULTUS, INC., 25-11 40th Ave., Long Island City 1, N. Y.

EXTREMULTUS POWER T

EXTREMULTUS is not merely a new name. It is a new *kind* of belt. It combines a polymer core — for strength and elasticity — with chrome tanned leather for high friction and flexibility. It is unique; it has never been successfully imitated.

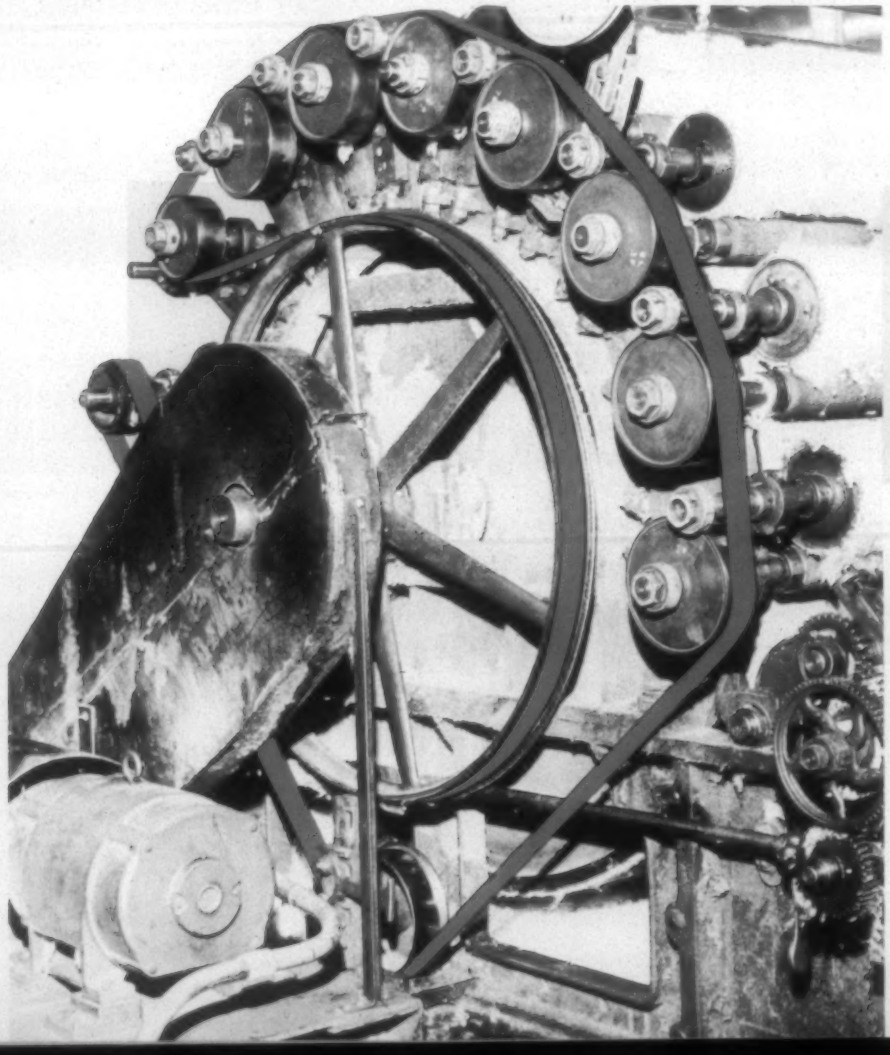
EXTREMULTUS belts have been job-proven in hundreds of textile mills and in many other industries. Mills that have tried it are now converting to EXTREMULTUS 100%.

NO-SLIP EXTREMULTUS MEANS MAXIMUM OUTPUT

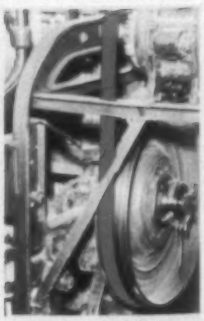
ELIMINATES START-UP PROBLEMS Won't stretch . . . won't stiffen around pulleys. No Monday-morning start-up problems . . . you get instant power transmission, with more output per shift.

KEEPS TENSION No need for belt take-up. The EXTREMULTUS polymer core is elastic, flexible . . . with NO PERMANENT STRETCH.

GIVES SMOOTH, CONSTANT SPEED At high or low speeds . . . and under the most severe conditions . . . EXTREMULTUS won't slap or chatter. It gives smooth, controlled power to improve every machine's performance.

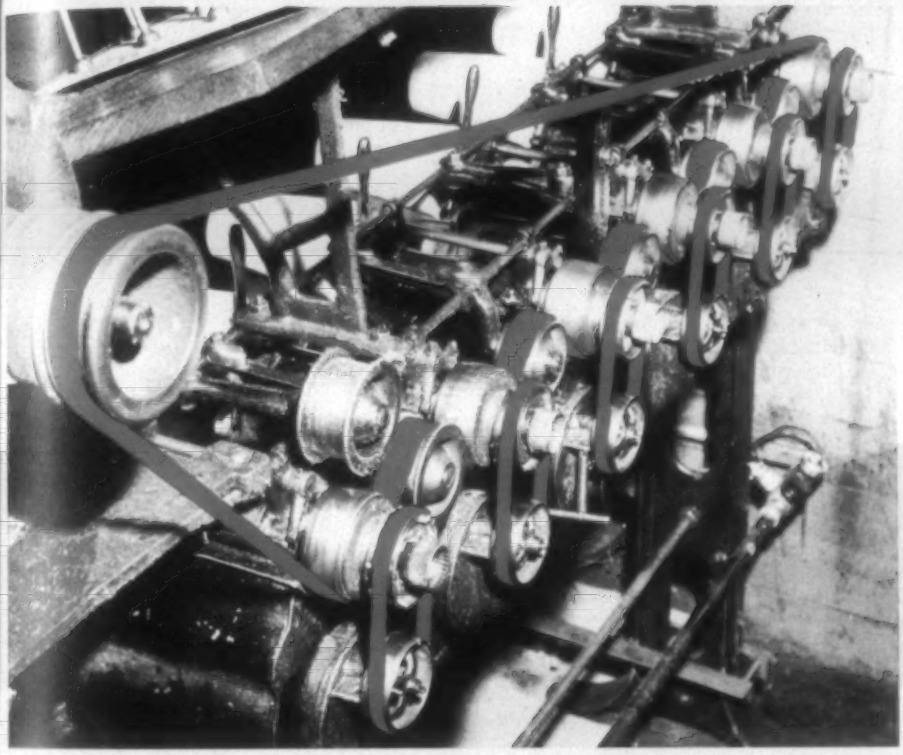


Woolen card stripper drive shows less down-time and more control of web because EXTREMULTUS has not stretched or slipped since installed . . . even with small arc of contact.



On loom drives EXTREMULTUS eliminates slip on start and stop, at higher ratios and shorter center distances. Ratios easily changed. Always a soft, positive start.

TRANSMISSION IN ACTION!



Constant spindle speed improves winding.

Oil from spindles will not cause EXTREMULTUS to slip.

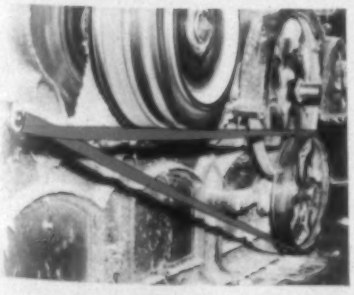
NO-STRETCH EXTREMULTUS ELIMINATES BELT TAKE-UPS

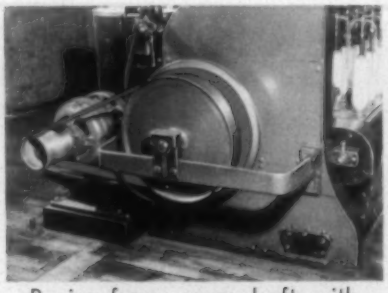
OUTLASTS ALL OTHER BELTING In every installation ever made, EXTREMULTUS has so far surpassed the operating life of the belting it replaced that mill personnel find it hard to believe their own records. EXTREMULTUS has been running without adjustment for *years*.

REDUCES BEARING LOADS Through its high coefficient of friction and unusual elasticity, EXTREMULTUS reduces bearing loads . . . thus resulting in less down-time and better production.

SPLICES QUICKLY You can make smooth, flexible, permanent splices in your own shop. The splice is as strong as the belt itself. It is not necessary to use a fastener.

On smaller doffer pulleys, get higher lickerin speeds without back shafts.





Roving frame super drafts with EXTREMULTUS belts have maintained required high speed without maintenance on every check since their installation.

On twisters and spinning frames EXTREMULTUS maintains constant spindle speeds.

EXTREMULTUS, INC., 25-11 40th Ave., Long Island City 1, N. Y.

FIND OUT HOW TO GET

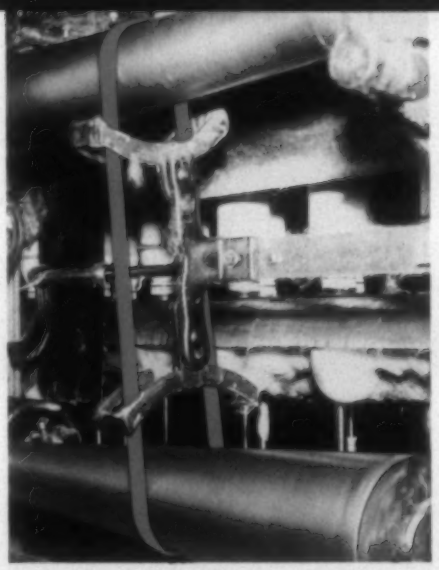
8 HOURS OF BELT EFFICIENCY OUT OF EVERY SHIFT

...THE EXTREMULTUS WAY!

Whatever your mill's requirements may be, it is almost certain that EXTREMULTUS can help you improve output and reduce maintenance expense.

EXTREMULTUS distributors and members of our engineering staff are always available for consultation and discussion.

Fill out the coupon below and let us know in exactly what areas of operation we can be of the most service.



On this roving frame, a 1" EXTREMULTUS belt replaced a 1¾" leather belt on the cone drive . . . maintaining constant speed under 60 lbs. added test weight. (All other belts broke under this test.)

EXTREMULTUS, INC.

25-11 40th AVENUE
LONG ISLAND CITY 1, N. Y.

☐ Send me EXTREMULTUS catalog.
I would like more information on how EXTREMULTUS:

- ☐ Keeps tension
- ☐ Eliminates start-up problems
- ☐ Outlasts all other belting
- ☐ Gives smooth, constant speed
- ☐ Reduces bearing loads
- ☐ Splices quickly

NAME .....
TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... STATE .....

Distributors serving the Textile Industry

BROWNING BELTING AND SUPPLY CO., INC.
Knoxville 17, Tennessee
BRUCKMANN AND CO.
Mobile, Alabama
CENTRAL BELTING, HOSE AND RUBBER CO.
Richmond 20, Virginia
DILLON SUPPLY CO.
Raleigh, North Carolina
DIXON SUPPLY CO.
Birmingham, Alabama
DODGE NEWARK SUPPLY CO.
Newark, New Jersey
THE DRUID OAK BELTING CO., INC.
Baltimore 18, Maryland
ELECTRIC MOTOR SALES AND SUPPLY
Chattanooga, Tennessee
H. N. CROWDER, JR., CO.
Allentown, Pennsylvania
LEWIS E. TRACY CO.
Cambridge, Massachusetts
L. M. ROBBINS CO.
Haddonfield, New Jersey
RUSSELL, MILHENCH & HARR[illegible]
New Bedford, Massachusetts
SAGER-SPUCK SUPPLY CO.
Albany 1, New York
SOUTHERN MILL SUPPLY CO.
Summerville, South Carolina
STULTZ ELECTRIC WORKS
Westbrook, Maine
TENNESSEE MACHINERY CO.
Nashville 3, Tennessee
TRANSMISSION ENGINEERING CO., INC.
Philadelphia 40, Pennsylvania
WALMSLEY BEARING CO.
Memphis, Tennessee
WHITE BEARINGS CO.
Charlotte, North Carolina

Distributors in all other major cities

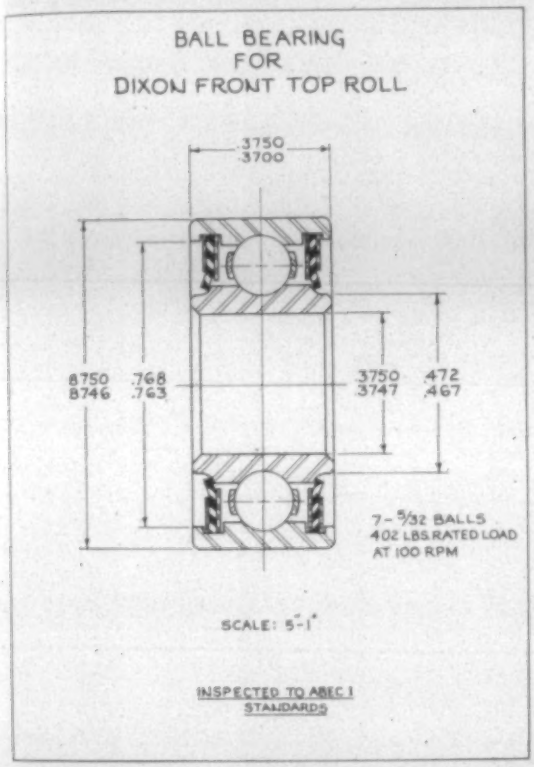


Fig. 4—The number of bearings are not indicative of roll life. The large single Dixon front roll bearing is held to a run-out tolerance of 0.0003 inches. The maximum total mathematical run-out of this construction is 0.0006 inches.

diameter less than ½-inch, using a ⅜-inch diameter. An obvious engineering fact had been overlooked for centuries. The smaller the diameter of the top roll arbor, the less effective is the braking power of the saddles. This is easily illustrated by imagining a turning wheel. To brake or stop the revolution of the wheel, it would be more efficient to grab it at the outer rim. To grasp it at its hub would make stopping extremely difficult and almost impossible without burning the hands. If the hub was the diameter of a pin, it would not stop regardless of pressure exerted.

A small diameter arbor on a top roll in comparison to

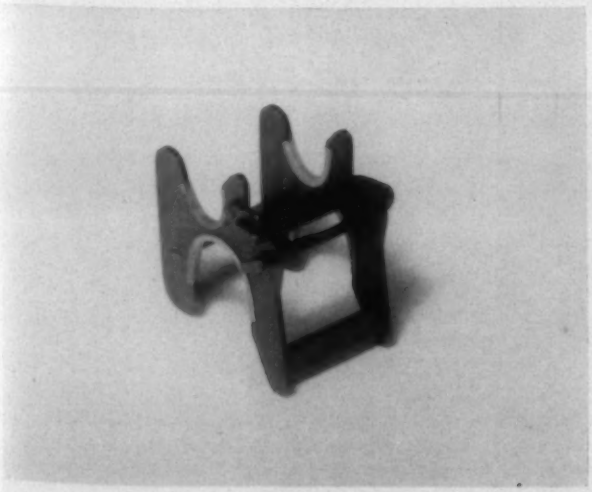


Fig. 5—Dixon Casablancas cradle with nylon bearing surface.

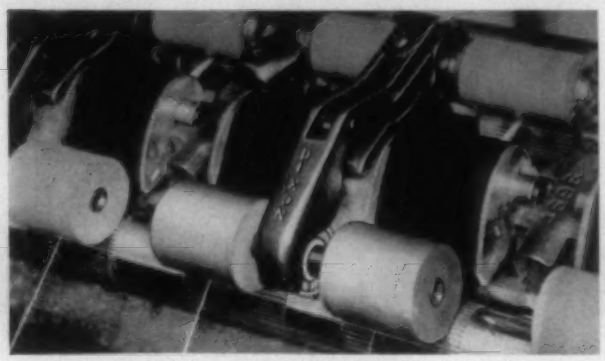


Fig. 6—Double apron Roth Custom Saddle Guide changeover.

the cot diameter is equivalent to a small hub on a wheel in comparison to its outer rim. The braking power of the saddle becomes ineffective on the smaller diameter. Many top roll manufacturers have followed Dixon Corp.'s lead in this simple design technique, so that now many top rolls have diameters less than ½-inch, sizes varying commensurate with the loads the rolls must carry.

Mills cannot afford to wait longer to modernize their drafting. If they wish to stay competitive, they must obtain the changes and improvements made in recent years. Some of these are:

(1) Keener competition among machinery manufacturers have forced improved designs and prices.

(2) Investment of spinning drafting changeovers can be paid back with savings made entirely from the spinning room.

(3) Modern engineered changeovers can be installed in several steps, designing each step to compliment other modernizations on the frame. This type changeover can be finally completed as budgets will permit.

(4) Newest anti-friction top rolls have eliminated the problems of redressing, repairing, failure due to lint and run-out, usually attributed to such rolls.

(5) Saddle braking power on top rolls is reduced to the minimum, thus giving more uniform and consistent roll action.

A Dixon Installation

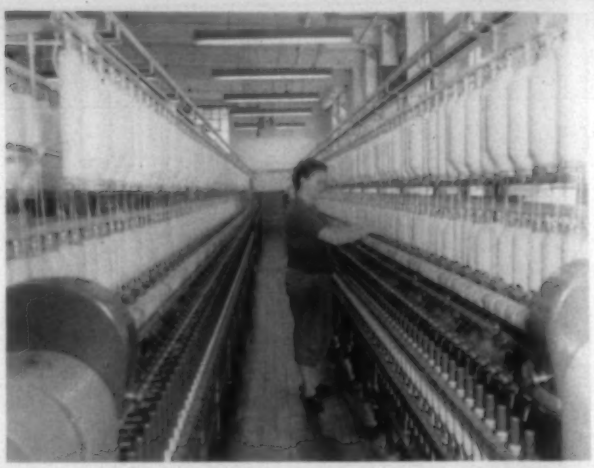
Worth Spinning Co.

Stony Point, N. C.

ABOUT three years ago, Worth Spinning Co., Stony Point, N. C., began a modernization program on its spinning equipment which included the addition of Dixon Corp. front rolls and saddles. The mill reports the advantages it receives from use of the Dixon equipment are: (1) frames run better; (2) frames stay cleaner and are easier to clean; (3) the front roll has a ball bearing to turn on allowing smoother operation; and (4) oiling cap bar nebs on the front roll is eliminated.

The mill has changed over 22 frames to Dixon equipment. Drafts have been greatly increased by the mill since the modernization began but this is not attributed altogether to the use of Dixon front rolls. They have, however, been an important factor in this increase.

Worth Spinning Co. has 48 spinning frames. Of this total, 40 are Whitin Model 1922 and the other eight are Whitin Model 1948. The 22 frames changed to Dixon front rolls and saddles have been running for approximately 14 months. So far the mill has not had a single top roll bearing failure.



The modernization program which began three years ago has included the installation of Whitin Super Draft, Dixon front rolls and saddles, Pneumafil broken end collectors and Lint Free creels, roller bearing spindles, and Parks-Cramer multiple outlet frame cleaners trailed by overhead cleaners.

Draft Increase

The mill spins combed cotton into a yarn count range from 36s to 60s. Before the modernization program began yarns from 45s to 60s were spun from 5.10 hank roving. Now, after modernization, 45s to 60s yarn is spun from 3.10 hank roving. The yarn counts from 36s to 45s were previously spun from 3.75 hank roving. Since the changeover, these counts are spun with 2.25 hank roving.

The over-all modernization program done by Worth

Clyde Faires, overseer of spinning, spooling and warping, is displaying a spinning frame equipped with Dixon Corp. front rolls and saddles. In 14 months of operation, the mill has not had a single front roll ball bearing failure.

Worth Spinning Co. runs an average count, 39s combed yarn, at 152 r.p.m. of the front roll and 10,400 r.p.m. spindle speed.

Spinning has included the replacement of Whitin Casablancas drafting elements with Whitin Super Draft. Whitin roller bearing spindles were also put on the frames. The frames were also equipped with Pneumafil Corp. broken end collectors and Lint Free creels. Parks-Cramer multiple outlet frame cleaners were added. The frame cleaners are trailed by overhead cleaners. The frames have 3½-inch gauge and eight-inch stroke. Thirty-six of the frames have $1\frac{13}{16}$-inch rings. The other 12 have 1⅞-inch rings. The mill uses a 9x4½-inch roving package.

The mill is now installing synthetic top roll clearers on its spinning. This type top roll clearer is reported to greatly reduce the number of front roll laps. This problem is emphasized by the use of pneumatic end collectors.

Speed increases or job load increases have not been the primary objective of the mill's modernization program. Worth Spinning has been seeking to make a better quality yarn. For an average count, 39s combed yarn, the mill operates the front roll at 152 r.p.m. and the spindle speed is 10,400 r.p.m. This yarn is made from 1⅛-inch strict middling cotton.

A Dixon Installation

Carlton Yarn Mills

Cherryville, N. C.

CARLTON Yarn Mills, Cherryville, N. C., installed Whitin Super Draft changeovers with Dixon Corp. ball bearing top rolls and saddle guides on 7,656 spindles approximately 3½ years ago. The modernization was done

(Continued on Page 80)

What Do You Know About Travelers?

A devoted week-end golfer tried unsuccessfully for years to lure one of his non-golfing friends into a golf match. But at every invitation the friend invariably pooh-poohed golf, called it a child's game and described it as a complete waste of time. But the golfer finally won out. In a weak moment his friend accepted the long standing invitation. Once at the golf course, they made straight for the first tee where the kibitzer picked up a driver and banged into a ball without even as much as a practice swing. The ball soared precisely down the middle of the fairway, hit 30 yards short of the green, bounced nicely over the apron, rolled straight for the pin, rimmed the cup, and stopped two inches away. Back on the tee, hands on hips, the duffer looked long and hard. "Hmmm," he said finally, "tougher'n I thought."

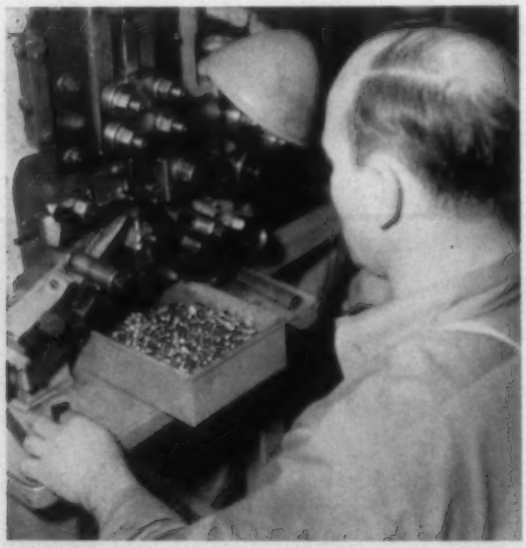
The point to this tale is that the duffer's comment pretty well sums up the reaction you might get from a piece of wire that's been made into a traveler. The transformation is more complicated than you think. To find out just what's involved, TEXTILE BULLETIN visited A. B. Carter Inc., Gastonia, N. C. Carter has been in the traveler business through its subsidiary, Carter Traveler Co., since 1940.

How It's Done

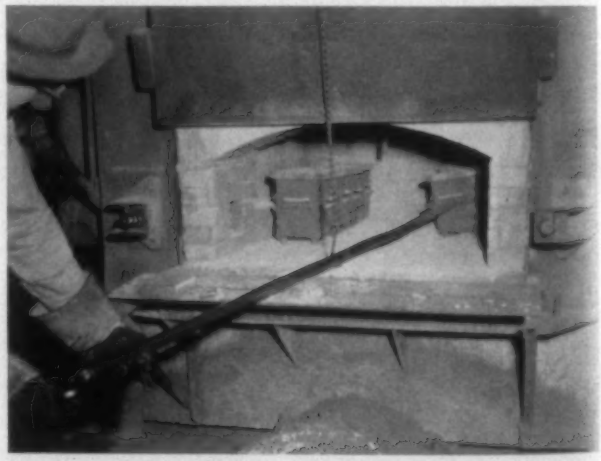
How does Carter make a traveler? To begin with, traveler raw material is a custom-made low carbon steel wire available from only two suppliers in the U. S. Each style traveler requires its particular weight of wire, of course, and since there are an estimated 22,000 different styles and sizes of travelers that have been used by the textile industry, inventory control is a major consideration. Of the known 22,000 styles and sizes, Carter has made some 15,000 to 16,000. Some 10,000 of these styles and sizes are carried in stock. Carter now has in stock *several billion* of the things.

E. H. (Hinkie) Gregg was with A. B. Carter long before the company went into the traveler business. He is secretary, assistant treasurer and general manager of the firm.

In turning out its travelers Carter feeds rolls of the custom-made wire into custom-made cutting machines, any one of which can be set up to produce a variety of styles and sizes. The capacity of the cutting machines varies according to the size of the traveler. Small travelers can be cut at speeds up to 200,000 an hour. But the relative importance of speed is reduced by the fact that on some styles Carter has as much as 70% rejects.



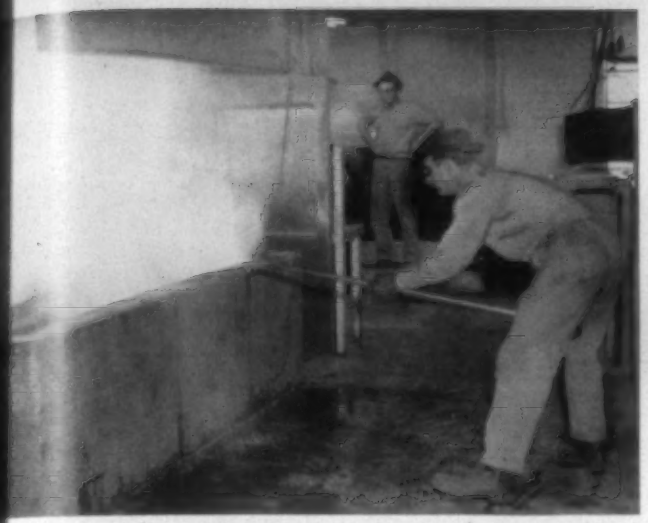
This cutting machine is shown producing 45-grain travelers for one-inch twister rings out of 130-gauge traveler wire. The cutter has a capacity of 9,000 per hour. Harold Kelly, cutter operator, has been with the firm almost 20 years.



Following the cutting operation, Carter travelers are heat treated in nickel vats at 1650° F. for from six to eight hours.

From the cutting machines the travelers are taken to nickel vats where they are heat-treated at 1650° F. for from six to eight hours. Taken from the furnace, they are dunked into either an oil or water bath. An oil quench is the latest thing in the treatment of certain traveler styles, but many styles can't take the oil treatment and must be quenched in water instead.

Coming out of the bath, travelers have the hardness of glass. So much as a hard look would cause them to pop. To get spring temper back into them, they are subjected to a two-hour tempering treatment that gives them a Rockwell C hardness of from 55 to 60. This level of hardness is a critical factor in the production of travelers. They must



Coming out of the heat treating furnaces, the travelers are dunked into a cold water bath. At this point in their manufacture, the travelers have the hardness of glass. A two-hour tempering treatment returns them to a Rockwell C hardness of from 55 to 60.

never have a greater hardness than the rings they run on. But at the same time they can't fall far short of the hardness of the ring. Either condition causes rapid wear.

At this point in their production the travelers are rough and have a bluish appearance. They have to be polished next, an operation performed in a series of three tumbling cycles. They are first tumbled in a bin of coarse pumice grit. A second tumbling comes in a bin of finer pumice grit. Final tumbling is with shredded leather and wool. The entire operation takes from 72 to 106 hours, again depending on the size and style of the traveler.

To keep the travelers as smooth and shiny as they are when they come out of the tumblers, Carter subjects them to a special oil bath. This same treatment renders them rustproof. Following this they are given a 100% final inspection prior to boxing and shipping.

Plated Travelers

A recent development in the production of spinning travelers is the addition of a nickel plate. Nickel plated travelers are said to last three to five times longer than conventional travelers. The plated travelers are also said to result in better quality yarns, with fewer ends-down attributed to traveler changes.

Carter began nickel plating certain styles and sizes of its spinning travelers last Fall. No twister travelers are plated. The plating operation adds 0.001-inch inside diameter and 0.001-inch outside diameter to the traveler but no weight is added. The plating triples the cost of the travelers, and Carter is currently plating about 20% of its total production.

What's the future for plated travelers? Carter believes they have much to offer on certain styles and at certain speeds. The fact was emphasized that plating is *not* designed to permit higher speeds, only longer life.

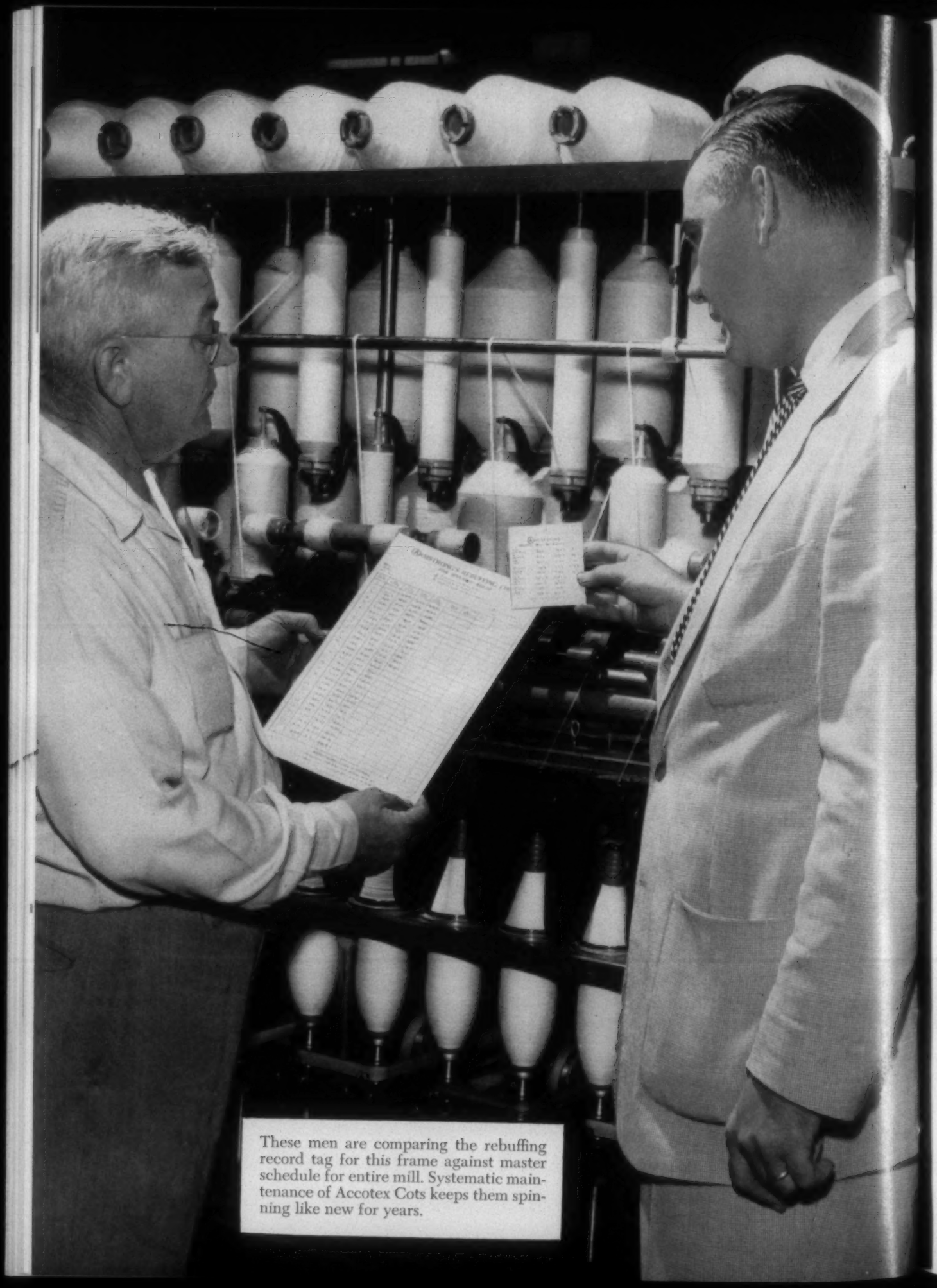
Buck Lutz, tumbler operator, is shown loading a batch of No. 10 travelers into a finishing tumbler. In putting the finish on its travelers, Carter tumbles them first in grit and then soft leather scraps for periods ranging from 72 to 106 hours, depending on the style and size of the traveler.

And That's It

That's the story on travelers. And judging from Carter's experience, it must be a good business to be in. Formed in 1940, Carter Traveler Co. has grown to a productive capacity of 15 million travelers a week. Six years ago (March 1953) the company reached a gross of $50,000 a month. This past March sales grossed $100,000 and the firm is heading for its biggest year. It is represented by seven salesmen in the Southern states; one each in New England, Canada, Mexico and Central America; and two each in Europe and South America. In all, the company—including still another subsidiary, Mill Devices Co. which manufactures and distributes the Boyce Weaver's Knotter—has 108 employees. They seem to think the traveler business is good, too. Their average length of service with Carter is a remarkable 18 years.

Carter doesn't trust to spot checking in maintaining highest possible quality. Each and every traveler is checked prior to shipment.

The textile machinery which ushered in the Industrial Revolution in England and which was to form the basis for modern textile processing was invented primarily for the spinning and weaving of wool, but it was easily adapted to cotton and other fibers. Cotton manufacturing did not attain great commercial importance until Whitney invented the cotton gin in 1793.



These men are comparing the rebuffing record tag for this frame against master schedule for entire mill. Systematic maintenance of Accotex Cots keeps them spinning like new for years.

Get maximum production of high-quality yarn . . . for years . . . with Armstrong Accotex Cots

The right spinning cot can make an important difference in helping you get the most out of your high-draft frames, both in terms of yarn quality and quantity.

That's why it pays dividends to select these cots carefully, to maintain them systematically . . . and to evaluate their performance regularly.

Many mills have found that they get the optimum combination of high yarn quality, trouble-free performance, and long service life by standardizing on Armstrong Accotex Cots. One big reason for this is that the broad Accotex line includes roll covers which are engineered to combat almost any spinning problem.

This means that no matter what fiber or blend you're spinning . . . no matter what type of equipment you're using . . . there's an Accotex Cot that's right . . . and proved right . . . for the job.

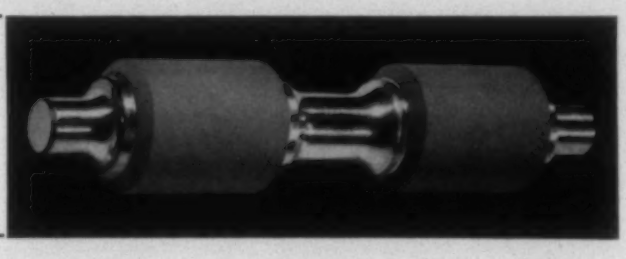
Accotex Cots are durable, too. Their tough synthetic rubber compounds resist "hollowing out" or grooving and are not affected by oils, dyes, or yarn-treating chemicals. In many cases, Accotex Cots give up to a year of three-shift service before they need to be rebuffed.

Because spinning cots are so important to yarn quality—and quantity—many mills find that a systematic cot maintenance program is well worthwhile. A regular rebuffing schedule can add years of like-new performance to roll covering life.

Your Armstrong man will be glad to help you select the right Accotex Cots for best performance in your mill. And he'll work with you to establish a regular schedule of cot maintenance. He'll also supply tags to record rebuffing schedules for individual frames as well as a master rebuffing chart for all the frames in your mill.

Ask your Armstrong representative about this the next time he calls, or write for more information to Armstrong Cork Company, Industrial Division, 6506 Davis Ave., Lancaster, Pennsylvania.

No matter what fiber or blend you're spinning, no matter what kind of equipment you have, there's an Armstrong Accotex Cot that's specially designed to help you get top-quality spinning.



Armstrong ACCOTEX COTS

. . . used wherever performance counts

The A.T.O.E. Discusses

rubber-covered squeeze rolls

loomfixers' duties

paper indicating dobbies

teflon-coated slasher cylinders and rolls

Question No. 1—Discuss your experience with rubber covered squeeze rolls. Give the cycle used for buffing squeeze rolls and dresser rolls, and tell how buffing is performed.

Mill C: We have been using rubber squeeze rolls in all our slashers for about five years. We have West Point Foundry & Machine Co. double squeeze roll size boxes with pneumatic lifts. Our rolls weigh about 800 pounds. We run them at 40 to 70 yards per minute and from dead weight to 200 pounds. The additional weight is added by pneumatic pressure. Our buffing is done by: (1) use a round nosed cutting tool with roll turning at 750 r.p.m., slow traverse and take about 1/8-inch cut; (2) dress with medium or fine emery cloth at the same lathe setting by wrapping a block with the emery cloth and taking a very light cut.

Mill F: We use rubber covered rolls. We have been using Dayton covering but are planning now to try some rolls from Samuel Bingham & Son Mfg. Co. We have West Point Foundry size boxes with pneumatic loading. We buff our rolls every six months (both squeeze and dresser). The rolls are placed in a lathe and buffed with a motor driven emery wheel at extremely high speed.

Mill H: We use rubber covered squeeze rolls on the back of four towel slashers and like them very much. We use conventional two-roll size boxes. We have two rolls from Dayton Rubber Co. and two from Stowe-Woodward. We have these rolls buffed every six months. The rolls are buffed in a lathe with a special emery wheel attachment.

Mill I: We use rubber covered rolls made by U. S. Rubber Co. on the back roll of our slasher. We found the rubber roll does a very satisfactory job in this position but were not able to get a good dressing job with a rubber roll on the front. Rubber rolls should be buffed every six months in a lathe using a special grinding attachment.

Mill J: We use Saco-Lowell Multi-Duo rubber covered rolls on the back only. We tried using them on front and back but were not successful. We buff approximately every six months in our machine shop.

Mill K: We get good results with rubber covered squeeze rolls. The rolls were made by West Point Foundry. We use the conventional type size box. Buffing is done with a Dumore grinder attachment for a lathe. The rock is turning 2,200 r.p.m. and the roll is turning 100 r.p.m. in the same direction.

Mill L: We use rubber rolls covered by Carolina Rubber Hose Co. in a Griffin size box. This is a one roll box. We buff these rolls, as needed which is usually about every five months.

Mill M: We have been using rubber covered squeeze rolls in our Griffin size boxes for approximately three years. The rolls were covered by Carolina Rubber Hose Co. We buff them about every six months. Buffing is performed by placing a roll in a lathe and using a high speed buffing or grinding wheel.

Mill N: We use Griffin size boxes on our high speed slashers. We have rubber covered squeeze rolls from Dayton Rubber Co. and Carolina Rubber Hose Co. We check our rolls with a Durometer made by the Shore Instrument & Mfg. Co. and also by visual observation. We buff the rolls in our own machine shop. They need buffing every four to six months and sometimes more often.

Mill O: We find rubber covered rolls work satisfactorily in a Griffin size box. We buff when our Durometer reads 50.

Mill P: We use squeeze roll covering by Dayton Rubber Co. on West Point Foundry size boxes. We buff only as needed. Rolls are buffed in our machine shop using a lathe and a grinding wheel attachment.

Mill Q: We use Carolina Rubber Hose Co. covered rubber squeeze rolls in our Griffin size boxes. We buff on a

Alabama Textile Operating Executives, meeting at Alabama Polytechnic Institute, Auburn, May 2, discussed rubber covered squeeze rolls, and Teflon coated cylinders and rolls on slashers; experiments with giving loomfixers basic supervisory responsibility, loomfixer's breakdown duties, and operation of paper indicating dobbys. Here's an account of their carrying's-on.

12-week cycle. Our buffing wheel is Silicon Carbide Stone No. 24, and we use 24 grit. The stone turns at 3,500 r.p.m. and traverses the roll at 1½ inches per minute. The squeeze roll turns at 66 r.p.m. The first cut is deep enough to clean the roll. The second cut finishes the roll.

Question No. 2—Discuss the advantages of Teflon covering for slasher cylinders and guide rolls. Do you know of anything that can be sprayed or brushed on guide rolls to replace worn places in Teflon?

Mill A: We have Teflon covered guide rolls which have given satisfactory service. They are very easy to clean. We have had these rolls for six months but cannot estimate how long they will last. We do not know of anything that can be brushed or sprayed on these rolls to repair a spot where the Teflon has come off.

Mill C: We use Teflon covered rolls in our gas fired slasher ovens and have practically eliminated scale and laps. We have some rolls that have run for three years before having to be replaced. We have not tried anything to replace worn spots on our rolls.

Mill F: It is extremely important to use Teflon covering on cylinders near the size box and guide rolls nearest the size box when running at high speed. The coating prevents sticking. We have been running Teflon coating on high pressure drying cans for four years and have had no difficulty with worn places as yet. We know of nothing to be brushed on in case of wear but understand several mills are using a Teflon tape made by Minnesota Mining & Mfg. Co.

Mill H: Teflon covering on rolls and cylinders give a decided advantage in preventing lint and trash from sticking to them. We haven't had any trouble with Teflon on cylinders. However, pre-dry cans which run a good many dye beams develop pits and have to be changed about once a year. We know of nothing that can be sprayed on to repair worn places. We have used some Teflon tape on rollers and found it satisfactory.

Mill Q: Teflon coating eliminates sticking of size on cylinder and guide rolls. Particular care is not necessary for Teflon coated rolls. The estimated life of the covering is three to five years. Cost of Teflon coating for a 30x60-inch cylinder is $120 plus freight. We have heard of a heat process and a tape which can be used for repair purposes in the mill but have not had any experience with either.

Question No. 3—Have you had any experience using loomfixers for basic supervisory responsibilities?

Mill I: We have been using loomfixers for basic supervisory responsibilities very successfully for about eight months. The loomfixer is in charge of each person on his job. He is also responsible for any bad work that is on his job including bad warp and filling. He does not have to have permission to refuse to run bad warp or filling. He has the authority to reprimand any person on his job but cannot discharge directly.

Mill J: We have started a program of using loomfixers for basic supervision. This program is: (1) place help on job and report to second hand if anyone is out; (2) see that weavers check cloth for quality; (3) show up seconds; (4) see that battery fillers are doing their job properly; (5) check on other help such as sweepers, oilers, cloth doffers, etc., to see that they are on schedule and doing their jobs correctly.

(Eds. Note: Fifteen mills answered they had no experience using loomfixers for basic supervisory tasks.)

Question No. 4—What breakdown jobs do you include in your loomfixers' duties?

Mill A: Our loomfixers replace lays, race boards, friction gears, sand roll bearings and rocker shafts.

Mill B: Our fixers are responsibile for putting in new shuttles, lays, race boards, crankshafts, camshafts, friction gears, take-up rolls and loomsides.

Mill C: Our fixers do all breakdown jobs.

Mill D: Our loomfixers are required to perform all breakdown jobs except lays, camshafts and loomsides.

Mill E: All breakdown jobs in our mill are done by utility fixers.

Mill F: Our loomfixers are responsible for all breakdown jobs.

Mill G: Our loomfixers do all breakdown work with the help of learner fixers.

Mill H: Our loomfixers do all breakdown jobs.

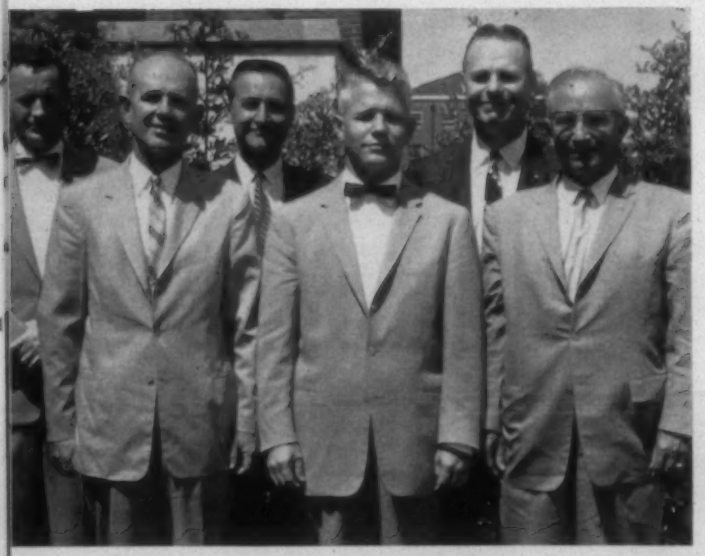
Mill L: We have breakdown men who put in all lays, crankshafts, camshafts, friction gears, loomsides and hopper stands. They also help fixers put in sand rolls.

Mill M: Our loomfixers replace race boards and rocker shafts. Breakdown men do the other big jobs.

Mill N: The only breakdown jobs our fixers do are rocker shafts and lay swords.

Mill O: Our loomfixers do all breakdown jobs.

Mill Q: The breakdown jobs done by our fixers are:



Case, Morriss, Brown Owens, Edwards, Adams

New officers and executive committee members of the Alabama Textile Operating Executives include Burton Case, Huntsville (Ala.) Mfg. Co., executive committee; Wendell Morriss, Avondale Mills, Birmingham Plant, general chairman; Bill Brown, Shawmut (Ala.) Mill, West Point Mfg. Co., vice-general chairman; Hugh Owens, Geneva (Ala.) Cotton Mills, executive committee; Bill Edwards, Avondale Mills, Alexander City, executive committee; and Cleveland L. Adams, A.P.I. School of Textile Technology, secretary-treasurer.

NEW...SUPERIOR...

MANHATTAN SLASHER ROLLS

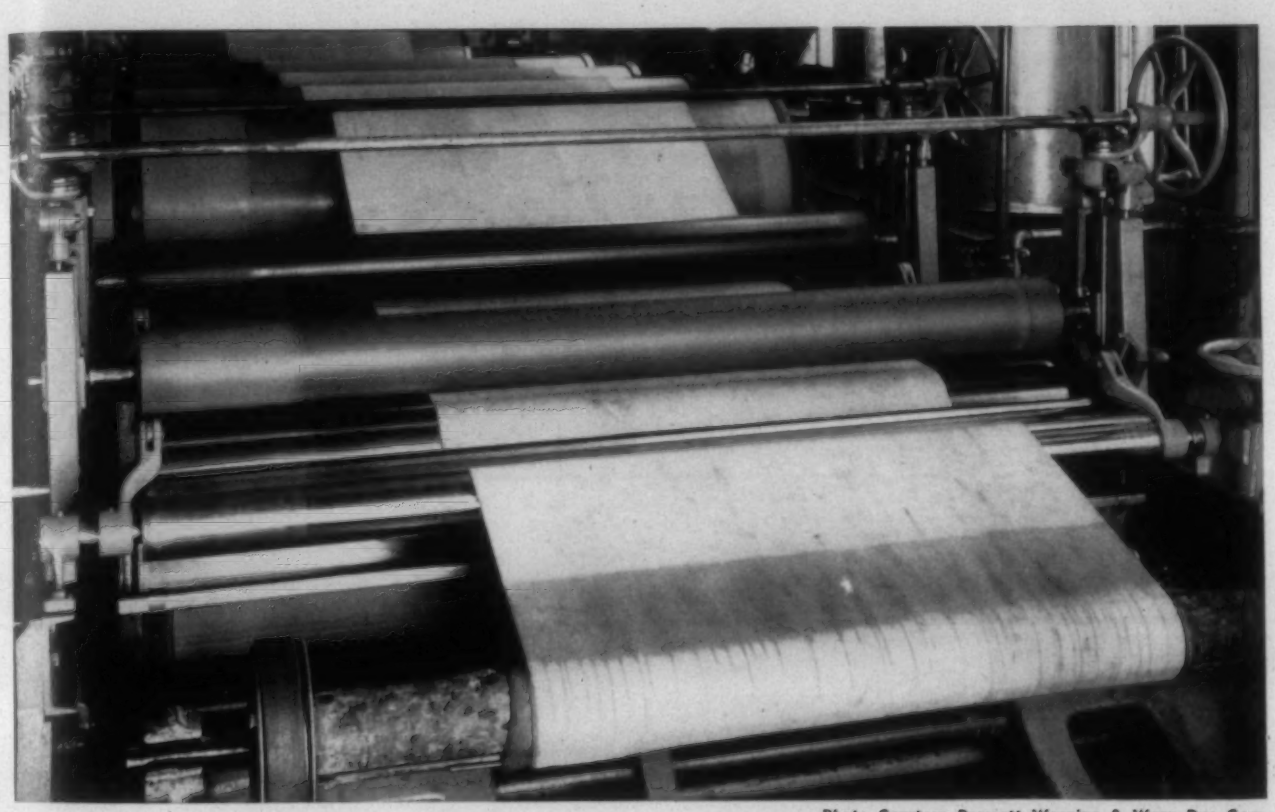


Photo Courtesy Prescott Warping & Warp Dye Corp.

FEATURE-FOR-FEATURE YOUR BEST BUY FOR IMPROVED SIZING AT LOWER SLASHING COSTS

- Special synthetic rubber compounds control size pick-up to your requirements
- Uniform, correct roll density assures *uniform*, even pick-up—the finish *you want*
- Accurate metering of size permits substantial savings in starch costs
- Distinctive red roll color permits faster, easier detection of yarn end breaks
- Keep perfect cushion *without* indentation—eliminate slasher downtime costs to maintain blanket
- Roll end-caps prevent metal corrosion between cover and metal core
- Provide highest resistance to starches, gums, softeners, oils or chemicals. Can be reground for longer life

NOW . . . GET FASTER, LOWER COST SLASHING . . . MORE UNIFORM YARN SIZING—USE MANHATTAN SLASHER ROLLS AT BOTH SQUEEZE AND DRESSING ROLL POSITIONS

RM-958

MANHATTAN RUBBER ROLL DIVISION—NORTH CHARLESTON, SOUTH CAROLINA

RAYBESTOS-MANHATTAN, INC.

Other R/M Products: Abrasive and Diamond Wheels • Brake Blocks and Linings • Clutch Facings • Asbestos Textiles • Mechanical Packings • Engineered Plastics • Sintered Metal Products • Industrial Adhesives • Laundry Pads and Covers • Bowling Balls

race plates, friction gears, sand roll bearings and rocker shafts.

Question No. 5—Discuss your exprience with paper indicating dobby looms, and card cutting and copying machines.

Mill F: We have 50 C & K paper indicator dobby looms. The paper cutting and copying machine is rather simple and a very efficient piece of equipment. We had some difficulty with the paper coming apart when we first installed our dobbys but found defective paper to be the fault. We are now using some sample Mylar which seems very promising.

Mill Q: Our experience with Staubli paper dobbys is limited but satisfactory. The card cutting machine is simple to operate and does a good job. Life of Staubli design paper is three to five months.

The LOOMFIXER And His Job

Part Seven

By WILMER WESTBROOK

THE brake is a very important and often neglected part of the loom. A brake that doesn't operate correctly can cause much extra work for both the weaver and the loomfixer.

A defective brake can cause broken shuttles, bent or broken filling forks, broken shuttle boxes and battery parts. It can cause breakouts and extra work for the weaver by letting the lay stop haphazardly with the shuttle out of the box.

An efficient brake will cause the loom to stop with the shuttle in the box and with the lay in correct position. On a filling stop the lay will be in back position and for a warp stop the lay will be in center position.

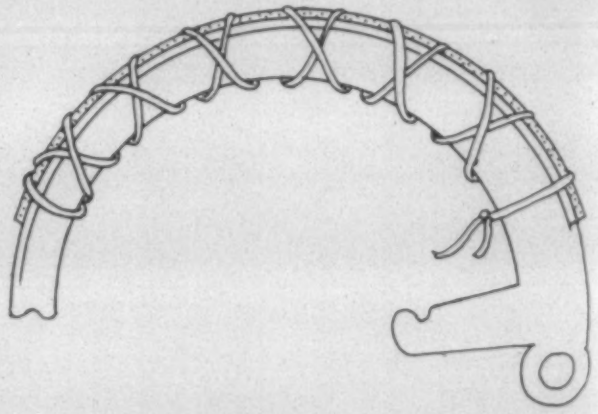
It is not hard to keep the brakes in good operating condition if preventive maintenance is practiced. Each loom should be checked periodically and caused to stop, both from the filling fork and from the warp stop motion, to see that the brake holds correctly. Weavers should be encouraged to flag any loom that stops with the lay out of position.

External, internal and band brakes are very similar except in the manner in which friction is applied. The external brake has one shoe that contacts about one-fourth of the exterior surface of the brake wheel. The internal brake has two shoes that expand to cover almost all the inner surface of a rim made as part of the brake wheel. The band brake has a band encircling a drum attached to the crankshaft.

Leather Or Webbing

Earlier models of the external and band brakes had friction material of leather or webbing. Band brakes sometimes use a lining similar to the webbing used in automobile brakes. Cork is now used almost exclusively as a lining for external and internal brake shoes.

The external brake shoe may have cork inserts, like bottle stoppers, or it may have a strip of cork glued to the shoe. Internal brake shoes are lined with cork strips glued into place. Band brake linings are often attached with both glue and rivets.



The cork of a freshly lined brake shoe can be held in place with scrap yarn until the glue is thoroughly set. This usually takes from four to eight hours.

Extra brake shoes or bands should be kept at the work bench so that a minimum of downtime will be involved when a brake needs relining. In his spare time the loomfixer should remove the old lining, thoroughly clean the shoe or band, and reline it. Four to eight hours will be required for the glue to set. A clamp can be made to hold the lining in close contact with the metal while the glue dries or it can be wrapped and tied tightly with scrap yarn to insure a good bond.

The brake shoe or band should clear the brake wheel or drum about $\frac{1}{16}$-inch when the brake is "off." With the brake "on" the shoes or band should make even contact and exert enough pressure to bring the loom to a quick, smooth stop.

The external brake shoe is adjusted in relation to the brake wheel at its fulcrum point. A lug on the bushing

The effectiveness of the brake has much to do with the over-all efficiency of the loom. A planned program of preventive maintenance is the best method to keep the brake in good operating condition.

TEN-O-FILM starches and synthetics go hand in hand

Looking for a starch that's compatible with the adjuncts you use in warp sizing synthetics? Ten-O-Film is your answer. This chemically modified starch derivative was specially developed to simplify and improve processing of both the new synthetic and natural fibers.

Ten-O-Film brings new economies to sizing operations. It requires less boiling time than conventional starches: Ten-O-Film reaches stable viscosity in 30 minutes and remains stable even under prolonged heating and circulation. Desizing can be carried out more readily, hence more economical dyestuffs can be used and with greatly reduced bleeding. The clarity of Ten-O-Film sizes will not mask the bright or pastel shades so widely used in modern fabrics. In desizing, the soap boil-off may sometimes replace the enzyme desizing process.

These are only a few of the advantages of using Ten-O-Film starches. Our technical representative will give you the complete Ten-O-Film story. He has tried and tested formulations for all popular synthetic and natural fiber blends.

The technical facilities of the world's largest corn processors await your call. These facilities include laboratories devoted to continuing research in textile technology, as well as unmatched sources of firsthand textile knowledge and experience. Our technical representative will be glad to help you take advantage of these resources. For full information, call our nearest sales office or write direct.

TEN-O-FILM® starches

Fine products for the Textile Industry: CLARO® · GLOBE® EAGLE® · FOXHEAD® · TEN-O-FILM® starches · GLOBE® dextrines

CORN PRODUCTS SALES COMPANY 17 BATTERY PLACE, NEW YORK 4, N.Y.

that fits into the end of the brake shoe can be filed or built up to place the shoe in the correct position.

The internal brake shoes are adjusted with an eccentric stud at the fulcrum point that can be turned to equalize the position of the two shoes. It may be necessary to move the brake shoe bracket to get both the shoes aligned.

Operating Mechanism

The operating mechanism of all types of mechanical loom brakes is very similar. The brakes operate through the shipper handles in such a manner that, as the shipper handle is pulled on, the brake is released just before the driving clutch is engaged. Similarly, as the shipper handle is moved to the off position, the brake becomes effective as soon as the clutch is disengaged. A release lever located near the shipper handle can be used to engage or to disengage the brake manually.

A brake rod extends toward the front of the loom and is attached to the brake cam of the internal brake or to the brake shoe of the external brake. The brake rod spring on the front of the rod should be adjusted so that it will have no end play but will not be compressed with the brake "off."

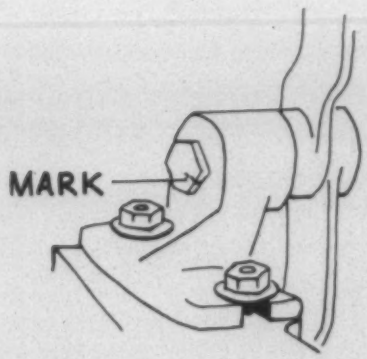
There should be approximately ½-inch clearance between the end of the release lever link and the brake lever. If this setting is not correct the release lever may not fall when the shipper handle is pulled on and the brake will be ineffective when the loom stops.

Pressure of the shoes is controlled by the brake lever spring. The spring bracket can be adjusted to give more or less tension to the spring. Earlier models of the external brake had a weight hung on the release lever but this weight has been replaced by a spring on most looms.

Protector

Many loomfixers neglect the two safety devices that are built into the brake and shipper assembly to protect the loom in case of a slam-off. A bracket on the frog engages a lug on the brake rod to exert pressure on the brake shoe when the frog is pushed forward by the dagger. The frog lip lever fits against the shipper handle and will knock it to the "off" position when the frog lip, attached to the frog, is pushed against it.

It is easy to test the effectiveness of these two safety



The eccentric stud that holds the shoes of the internal brake should be turned with the mark on the head of the stud toward the back of the loom. This is done so the stud can be turned later to compensate for wear.

When the shipper handle is pulled to the "on" position, the brake is automatically disengaged. Weavers should be encouraged to flag any loom that stops with the lay in the wrong position.

devices. Stop the loom motor and pull the shuttle out of the box. Pull the shipper handle to the "on" position and pull the lay forward until the daggers contact the frog steels. If the shipper handle is knocked off and the brake is engaged when the dagger pushes the frog forward the loom is protected.

All working parts of the braking mechanism should be well-lubricated but care should be taken to keep oil and grease from the brake linings and their contact surface on the brake wheel. If the brake linings become coated with lubricant they can be cleaned with a solvent or with fine emery or crocus cloth.

A planned program of preventive maintenance of the loom brakes will pay big dividends in increased loom production, reduced seconds, fewer broken loom parts, and less work for both the weaver and the loomfixer.

Indian Head Introduces No-Iron Sheets

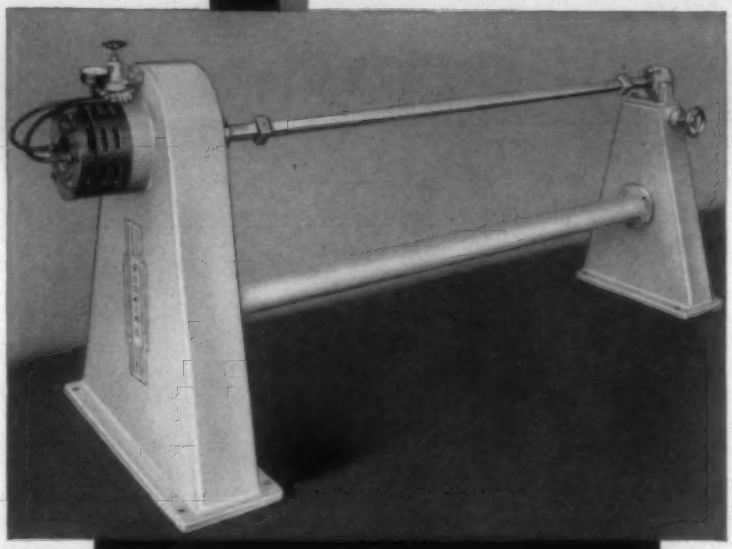
Indian Head Mills has announced the introduction of no-iron bedsheets and pillow cases in solid colors. Almost exactly one year ago today it brought out the first truly no-iron cotton bedsheets and pillow cases under the Pequot Easy-Care brand.

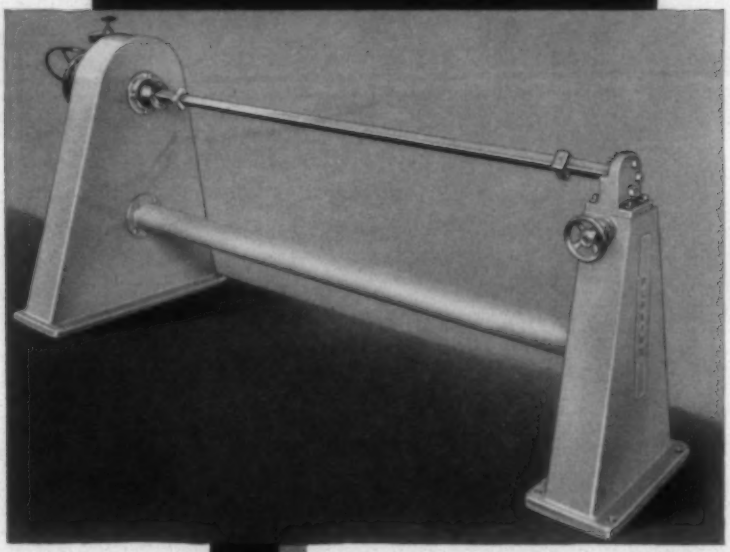
The new no-irons will come in four popular colors: yellow, blue, green and pink. All colors are vat dyed. The fitted bottom sheets will be available in twin and double bed sizes; flat sheets, in the 72x108-inches and 81x108-inches. Pillow cases are 42x38½ inches. The fitted sheets are Sanforized.

Indian Head's Pequot Division has been working on perfecting a no-iron sheet in solid colors ever since it brought out the first no-iron sheets in white and stripes. The new solid color no-irons have the same features as the no-iron whites, the announcement said. They are non-chlorine retentive, will dry in little more than half the time it takes ordinary cotton sheets to dry, and can be washed in any conventional manner. No special laundering is required—can be washed by hand, by machine, or in any commercial laundry. They can be line dried or machine dried.

NEW PERKINS LET-OFF

saves maintenance time and labor





Replace your old-fashioned LET-OFF NOW . . . with this modern

LET-OFF PACKAGE UNIT

recently developed for the Textile and Paper industries

Tension is easily adjustable through an airbrake, controlled by a small valve.

Tension is proportional to the amount of air pressure applied which can be read on the gage, right next to the valve.

ADDITIONAL FEATURES

- **Reel shaft running in anti-friction bearings**
- **Provision for in and out adjustment of reel shaft and lateral adjustment of reel shaft**
- **Heavy steel box-type frames**
- **Easy installment**
- **Low cost**

B. F. PERKINS & SON, INC.

HOLYOKE, MASSACHUSETTS

Acquiring Modern Facilities

PART 2

How a new mill was designed

By H. M. ROGERS*

FOLLOWING several years of study of factors affecting their Northern finishing operations as compared with Southern finishers, the management of the Kendall Co. decided, early in 1955, to build and equip a modern finishing plant for medium goods at a site which had been acquired some time earlier.

The new bleaching, dyeing and finishing plant of Kendall Mills, Division of The Kendall Co., Bethune, S. C., is one of the newest, most modern plants in the industry. It includes several novel and interesting features and is an excellent example of a mass production plant with high output per man-hour.

The project started one year in advance of any layout or construction work, with studies to find a suitable site. The result was the selection of the site at Bethune on the Seaboard Air Line Railroad and U. S. Highway No. 1, and close to a point where both the railroad and highway cross Lynches River. The river is, in South Carolina, termed a Class C stream. (By Class C, it is meant that the water is suitable for propagation of fish, for agricultural and industrial use and other uses requiring water of lesser purity.)

Considerations influencing the selection of this site included the fact that a supply of soft water could be obtained, without treatment, from wells driven into the underlying sand strata. This eliminated the requirement for a filter plant. Also, Lynches River was available as a second source of supply if necessary. The supply lines from the driven well field are so arranged to handle the new source of raw water in the future if required. Also, the piping network is so disposed as to bring in additional wells.

Other Factors

Other important factors considered in site selection were: (1) the site had to be favorably situated with respect to the seven cotton mills of The Kendall Co. in North and South Carolina with five of the greige mills in South Carolina; (2) availability and cost of fuel; (3) possibility of low-cost waste disposal; (4) labor supply and available wages; (5) community advantages; and (6) topography and soil conditions at the site.

The Bethune site was chosen after comparison with several available ones and about 450 acres of land was acquired, giving uninterrupted access to the river and providing for driven well fields.

New Plant's Products

The new plant is under the management of the Finishing Division of The Kendall Co. in Walpole, Mass. It is equipped largely with new, modern machinery and is set up to bleach, mercerize, dye and finish the line of cotton fabrics sold by Kendall Mills, most of which are currently being woven at the company's Southern plants. These goods have an average weight of approximately four yards per pound and include interlining fabrics, some clothing fabrics, industrial fabrics and Curity diapers.

The following requirements were set up in the beginning and are those on which the plant layout, building design and materials of construction were based.

(1) A modern plant in every way, which would provide the best working conditions for employees.

(2) The most convenient provision for receiving, storage and shipping of goods to be processed, including facilities for both truck and railroad transportation.

(3) A layout such that goods could be handled straight through the plant without backtracking or crossing of transportation lines and with the minimum of effort.

(4) Flexibility for expansion of the finishing plant.

(5) A layout on the site such that buildings for other products could be added, independent of expansion of the finishing plant.

(6) Construction and equipment to be of a character

Part 1 of this paper described the modernization of an old cotton mill operation. This installment covers the step-by-step planning and construction of one of the newest and most modern finishing plants in the country.

*Lockwood Greene Engineers Inc., Greenville, S. C.

requiring the minimum expense for maintenance and repairs.

(7) A compact, convenient arrangement for all employees' service departments.

(8) A central location for maintenance departments located close to those manufacturing departments having the most machinery, motors and piping and therefore requiring the most service.

(9) Reliable and economical equipment for providing water, steam, power distribution, compressed air and other mechanical services.

Shape Of Building

In translating these requirements into practical layouts the shape of the manufacturing space required first consideration. Many modern textile plants have been constructed as nearly square as possible, as this shape gives the minimum length of outside walls and thus is the least expensive type to build.

In the case of textile finishing plants, a very considerable length of travel of goods in process is required. A study of many plants reveals the fact that even with the most efficient layouts, it will be found that goods travel about 1,600 linear feet in process without considering any travel in greige cloth or finished goods storage areas. Many older plants in multiple story buildings will be found to require a travel distance for goods of twice this amount or more. This consideration dictated the shape of a finishing building of rectangular rather than square form, so that the required long runs for various types of equipment set in range could readily be secured.

To meet the requirements as set up, a design was developed with approximately 320,000 square feet of one-story construction. Wide spacing of columns, mostly 40 x 40 feet bays with some 40 x 50 feet, were adopted in order to minimize any interference of columns with machinery layout. From the standpoint of cleanliness and low maintenance cost, all interior walls are lined with glazed tile from floor to ceiling.

A straight line routing of work in process was devised with U-shaped travel. Receiving and shipping were located at the same end of the plant, with the office closely adjoining the folding room and shipping. The association of these departments and with all operations except the power house under one roof simplifies supervision.

U-Shaped Process Flow

The U-shaped travel of work in process brings greige goods storage, finished goods storage, receiving and shipping, into the same warehouse section and close to the main office. This layout gives the shortest possible travel for all work in process and provides adequate storage space in the right places for holding goods between processes.

Provision is made for expansion on three sides of the U-arrangement. The plant is designed for an initial capacity of about 120,000,000 yards per year and so arranged that over a period of years the plant can be doubled in size, or increased beyond that, without moving any important machinery or department, and without disturbing the basic routing of products through the plant. In this instance, the work in process travels approximately 1,800 feet from greige goods warehouse through process, back to the finished goods shipping.

In the construction, columns are provided in all outside walls to permit easy expansion. Where it was expected that the first expansion would occur, the wall was made of very light, easily removable construction — Marine plywood painted, on wood frame studs, with insulation provided between the sheathing.

The adopted scheme makes use of a central core in the building which provides space for all shops and storerooms, laboratories and testing rooms, for electrical distribution centers, locker rooms, wash rooms and toilets, and for some small offices for departmental supervision and record-keeping. Shop areas are separated from manufacturing areas by wire screen partition only, and outside of this core area, the whole plant is entirely without partitions. This gives a wide, open and airy aspect, with a minimum height under steel beams at any point of 22 feet.

In the dyehouse section, the roof is much higher, thus providing height for a mezzanine on which air conditioning units are located, as well as height for overhead can dryers on dye ranges. Also, this extra height provides a logical location for exhaust fans in the vertical walls, extending above the main roof level.

There is also achieved, with this location of utilities at the center of the plant, the shortest travel distance for employees to toilet and washroom and the closest possible location of plant departments for maintenance men and workshops.

Boiler Plant

The entire boiler plant is in a separate building because, if included under the same roof, it would have limited expansion possibilities of both finishing and boiler plants. Since coal was to be burned as fuel initially, a cleaner plant resulted by having the coal and ash handling located further away from cloth handling. Recently the plant has begun using natural gas, a distribution line having been brought into the area within the last few months.

The plant is windowless and ventilated with evaporative cooling.

The methods of properly conditioning textile plants has been the subject of considerable investigation. Finishing plants are among the most difficult to condition in the textile field. Therefore, heat removal, ventilation and air conditioning were all given the most thorough study in the attempt to provide the best working conditions for employees at a cost which could be justified. The means adopted included the following seven main provisions and considerations.

(1) The trapping and exhaust of all possible heat at the points of generation. This is accomplished by ample hoods carefully fitted and designed, and set over all dry cans, mangles, dye vats, J-boxes, hot water washers, etc. All hoods have ample exhaust fans mounted on the roof for easy access and maintenance.

(2) The trapping and removal of heat from all especially hot areas, particularly those occupied by tenter drying ranges and by starching tenter dryers. Such areas, as well as the dyehouse, are surrounded by rigid drop curtains extending down from the ceiling to within seven or eight feet of the floor. Exhaust fans on the roof draw air continuously out of such areas.

In addition, for all tenter areas, fresh air supply fans at

the roof level take air directly from outside through filters and discharge it downward into working aisles and working areas around and between tenter housings. This is found to produce very comfortable working conditions at all times. Both supply and exhaust fans are controlled manually from the floor and can thus be adjusted to accommodate varying outdoor conditions.

(3) In storage areas, unit heaters (at ceiling near shipping doors controlled from floor) and exhaust fans (located near the rear wall) serve to provide all needed heat and ventilation.

(4) In greige rooms, and in singeing, bleaching and mercerizing areas, air supply units suspended from ceiling with controlled heating coils bring in outside air through filters. Hoods over all heat producing units, plus some direct exhaust fans, provide a good rate of air change and comfortable conditions.

(5) In other areas where there is little or no heat from process, such as shop and stores areas, calender room, folding room, cloth packing and put-up, and in any sewing or fabricating departments are air-conditioned. Central station air-conditioning units of large size with air washers and using evaporative cooling with duct distribution are used. They are located in fan rooms at the main roof level.

(6) The dyehouse, in addition to a number of exhaust fans high up in vertical walls on three sides, is continuously supplied with large quantities of fresh air. This air is brought through filters, air washers and fans located on a mezzanine floor and introduced into the room at each of three or four apparatus locations without any ductwork whatever. It was considered desirable to eliminate sheet metal ductwork in the dyehouse on account of the danger of rusting and dripping.

(7) All main office space was fully air-conditioned with refrigeration, automatically controlled.

The finishing plant proper has approximately 235,000 square feet, while the combined warehouse has 85,000 square feet.

Main Plant Construction

The main construction of the plant includes red jumbo brick exterior walls with structural glazed tile interior walls. The floors are concrete with Kalman finish. The steel framing makes use of cantilever type design, including rolled section girders, cantilevered purlins and the roof structure itself is precast concrete channel tile with galvanized reinforcement. This channel tile is covered with Fiberglas insulation and built up bonded tar and gravel roof.

The lighting system is fluorescent with a high level of illumination and is supplied by dry type transformers at lighting load centers. The main power system of the plant has high voltage primaries from the power company with unit substations at plant load centers. Service voltage is 550 three-phase.

Operations consist of singeing, bleaching, mercerizing, drying, dyeing, starch tentering, Sanforizing, and inspection and put-up. Maximum use is made of moving goods in process on the run. In the warehouse, maximum use is made of fork lifts for multiple stacking in racks.

(Continued on Page 80)

Handling Section And Loom Beams

THE A.T.O.E. • NOTES FROM THE A.T.O.E. • NOTES FROM THE A.T.O.E.

Describe in detail your method of handling: (1) section beams from warpers to storage; (2) section beams from storage to slasher creels; (3) loom beams at the front of slashers; (4) loom beam storage; (5) loom beams from tying-in room to weave room; and (6) empty loom beams. What is your method of cleaning and storing harness patterns?

Mill A: We use a chain hoist and an overhead track to transfer section beams from the warper to a storage rack. A motor truck is used to move dye beams to the slasher, and a chain hoist and track is used to creel the slasher. Loom beams are doffed in front of the slasher by an electric hoist and are transferred to a storage rack.

We have an angle iron rack which is used for loom beam storage. Loom beams are handled with the aid of a two-wheel dolly. Empty loom beams are cross stacked according to size by an electric hoist in the slasher room.

We have a pattern truck situated at different spots in the weave room to hang the patterns on. Patterns are transferred to the cleaning room where they are taken off the pattern truck, cleaned and returned to the truck. The pattern truck is then pushed to the tying-in room.

Mill C: Beams are doffed on a truck at the warper and are pushed to the dye room and set on end with an overhead hoist. After dyeing, the beams are again set on end in the dye room until needed in the slasher room. They are transported on trucks to the slasher room and loaded on creels with a hoist. Loom beams are doffed at the slasher with a hoist and put on a special truck for transportation to a storage area. An empty loom beam is kept in front of each slasher to replace full ones.

Our empty 40-inch and 46-inch loom beams are stored standing up in an area assigned to each beam. C. & K. loom beams are stored parallel in a special rack which is four sections high. Loom beams are stored on special trucks made to carry single or double-beam patterns. Beams are transported to the loom on these trucks. Empty loom beams are stored in the same manner as our full beams.

We use portable tying-in and machine drawing-in, so we do not store harness patterns. We clean our harness and oil the ribs each time patterns are cut out.

Mill D: We truck beams from the warper room to the slasher room. Section beams are moved a distance of from 10 to 20 feet from storage to slasher creels with an electric hoist. Loom beams are doffed from slasher onto warp trucks and kept on the truck until put in the loom. Beams are put in E model looms directly from trucks. On X and X-2 model looms we use a chain hoist. We store empty beams in a rack or on spare floor. We keep patterns on a frame rack. Harness are cleaned with an air hose.

Mill E: Section beams are doffed from warpers to flat four-wheel trucks by a beam doffer. He pushes the beams to scales, weighs beams, then pushes to racks provided in the storage room. An electric lift is used to carry section beams from the storage room to the slasher creel. A chain hoist is used at the front of the slasher to doff full beams.

Loom beams are doffed onto small three-wheel trucks. These warps are left on the trucks until needed. Loom beams with harness pattern tied on are pushed to the weave room by warp haulers and stored on the same trucks used in the slasher room. Racks are used in the slasher room to store empty loom beams.

Harness patterns are pushed from the weave room to the tying-in room on trucks provided by warp haulers. Harness patterns are cleaned with compressed air and sprayed with oil by the lease cleaner. If patterns are not needed by the tying-in machine operator, they are hung, by styles, on movable racks by the lease cleaner.

Mill F: Our section beams are doffed onto dollies and pushed to the elevator. They are taken by the elevator operator to a storage room and placed in position by style. A slasher helper pushes the beams from storage to the slasher room so they will be readily available when needed for the next set. Loom beams are doffed directly onto warp trucks and placed in storage on the same truck.

Warps to be drawn are moved to drawing-in area on this truck. After drawing, the warps are again placed on this same type truck and pushed to the loom as needed. Empty loom beams are stored in a room adjacent the elevator and

What are the best ways to handle section and loom beams: from warpers to storage? from storage to slasher creels? from slashers to storage? and from tying-in room to weave room? Alabama mill men discussed this problem at the Spring meeting of the Alabama Textile Operating Exectives, May 2, at Alabama Polytechnic Institute, Auburn.

taken to the slasher room as needed. We do not store patterns.

Mill G: Our section and loom beams are doffed and creeled with the use of an overhead conveyor. Our loom beams are stored in racks. Loom beams are transported to tying-in and weave room on trucks. Empty beams are stored in racks. We blow off patterns and store them on a pattern truck.

Mill H: Section beams are doffed from warper on a flat truck and taken to scales where they are weighed with aid of a chain hoist. They are then transported by monorail and stored horizontally on the floor in straight rows. Section beams are moved from storage to slasher room by monorail. Loom beams are doffed by overhead chain hoist. They are placed on two-wheel trucks for transport to vertical storage racks. Our 56-inch ticking warps are stored in horizontal racks.

Ticking warps are taken to looms on two-wheel trucks and placed in loom by hand. Two men do the job with one on each end of the warp with a pipe to lift the warp into position. Towel warps are left on two-deck trucks after being drawn until ready for the loom. They are pushed to the loom on these trucks and put in with the use of hoist. Empty loom beams are stacked, about six feet high, by hand. Wide beams are raised on stacks with a hoist.

Harness are cleaned by compressed air and a home-made machine with a motor driven rotary card cloth brush. Racks made of channel and flat iron are used to store harness patterns. Leases for 125 patterns are kept on hand. Racks are in an area of low humidity.

Mill I: Section beams are transported to storage and slasher room with overhead track. Slashers are doffed with a chain hoist. The loom beams are stored in racks made of angle iron. Warps are transported on two-wheel trucks. Empty beams are stacked on top of each other. Patterns are cleaned with compressed air and stored in rack in the harness room.

Mill J: Our section beams are doffed on trucks and transported to scales. They are then taken by an overhead monorail to storage racks in the slasher room. Beams are moved from the rack to slasher creels with an electric hoist and monorail. Loom beams are doffed in the same manner.

Full loom beams are stored on angle iron racks located in the tying-in room. These racks are three beams high and have a counter-balanced loading gate on the front and back that allows the beams to be put on either of the three levels with an electric hoist on a monorail. Loom beams are taken to the weave room on two-wheel trucks. Empty loom beams are stored in front of the slasher in racks. Harness patterns are blown off with high pressure air and stored in racks made from angle iron.

Mill K: Our section beams are doffed on a truck and pushed by hand to the back of the slasher creel. They are lifted into the creel with hoist. Stored beams go in an angle iron rack with the use of hoist. The slasher is doffed with hoist. Empty beams are lifted into place by means of an air cylinder under the floor. The piston comes through the floor, and positions empty beams without being lifted by the operator.

Mill L: Our section beams are stored in three-tier racks by hoist. They are lowered from warper room on second floor to slasher room on first floor by hoist. Beams are creeled in the slasher by hoist. Loom beams are stored, using hoist, in four-tier racks until ready to be tied. Warp men carry warps from tying-in room to weave room by hand truck. Empty loom beams are stored in four-tier rack using hoist. We clean patterns with compressed air and oil harness ribs. Harness are stored on racks until ready to be tied.

Mill N: Section beams are doffed off warpers onto a four-wheel dolly. They are then taken to built-in platform scales and are weighed, numbered and recorded in a book. The section beam is then rolled to elevator for movement to the slasher room. In the slasher room, section beams are stored in racks or left on the dolly if racks are filled. Empty and full section beams are put in or out of slasher creel with electric hoist. The slasher is doffed with a hoist.

Loom beams are stored in vertical racks made of ½ x 3-inch flat iron with legs of flat and angle iron lagged to the wooden floor. We store 40 and 48-inch beams in these racks. We also have a four-tier rack for empty and full warp storage which is serviced with an electric hoist. The beam hauler takes patterns from the weave room and blows them off with compressed air. They are then taken to the drawing-in room and stored on racks.

Mill Q: Warper beams are doffed and transported with electric tramrail. They are stored in three-tier racks. Warper beams are taken from the racks with an electric hoist and placed on dollies for transport to slashers. Electric hoists are used at the slasher creels to position beams. Our double head slashers are doffed with hand hoists. Our regular loom beams are stored on end in racks on the floor and also in a horizontal rack. Certain wide beams have a ring welded in one end so they can be placed on end on the rack. A hoist is used in doing this. We stack empty beams in front of the slashers. We do not store patterns.

A Dixon Installation

(Continued from Page 59)

to enable the mill to improve its quality and efficiency. The mill runs yarns ranging from 8s single to 120s single of Dacron and long staple cotton.

The mill reports that the ball bearing top rolls have performed very well. The rolls have given a minimum amount of trouble during this time even though some few rolls with defective bearings were found in the beginning. Cleaning needs on the drafting system has been reduced by the ball bearings since there is no oily film on the rolls to attract lint and dirt.

Carlton uses an 8x4-inch roving package on 120s and other fine counts. The 8s and other coarse counts are run from 10x5-inch roving packages. The 120s are spun with a draft of 40 and front roll speed of 70 r.p.m. The 8s are spun with a draft of 12.80 at 170 r.p.m. of the front. Fine cotton counts are spun on ring sizes of $1\frac{1}{2}$ inches to $1\frac{5}{8}$ inches. Fine count packages weigh $1\frac{3}{4}$ ounces while coarse counts are spun on packages of four ounces.

The installation of the changeover was done with a factory supervisor and a mill crew of four men. Changeovers were completed at the rate of one per day. Current overhauling schedule on the frames calls for cleaning of drafting element and buffing top rolls every six months.

The frames are equipped with wooden creels and the vacuum ends-down collection system is made by Pneumafil Corp. Overhead cleaners are used to reduce manual cleaning.

In changing over the frames from conventional three-roll drafting it was not the mill's intention to speed up the front roll. The main interest was to improve quality and this has been done. Running conditions were also improved and the mill reports that its ends down per thousand spindle hours were decreased by about 50%.

Acquiring Modern Facilities

(Continued from Page 76)

The boiler plant which also houses water supply pumps and fire pump is purposely placed a good distance away from the main building to permit maximum room for expansion of the main plant, or even to build between the two an entirely separate plant which might also have a large steam demand. The boiler capacity includes two 60,000 pound per hour units. They are spreader stoker fired but are now using natural gas. Provisions are for a third unit to be added in the future.

Water System

The water supply system for the plant, consisting of driven wells, also includes a 2,500,000-gallon concrete ground level storage reservoir and an elevated water tank which serves the dual purpose as a sprinkler tank for the fire protection system, as well as an elevated surge tank for the service water pumps which take their suction from the ground storage reservoir.

The entire process water system of the plant is under pump pressure. These are multiple units, automatically controlled to operate on variation in system pressure, depending on the plant's demand. The well pumps are automatically controlled from reservoir water level. They have an automatic system of selective cycling which prevents over-pumping any one well.

The waste disposal system consists of double lagoons

which receive the industrial effluent from the plant during its five days per week operation, and discharges the settled waste to the river over a seven-day, 24-hour per day period. Before reaching the river, this waste is aerated through open channels and ditches for almost one mile. The dilution capabilities of the river are sufficient to make other treatment unnecessary.

This plant replaced some older facilities of the company which were located in New England. While a few items of machinery were moved, by far the greater portion of equipment was purchased new and was designed to run at the highest speed. The equipment is set in range wherever possible. It is equipped with all the latest controls and automatic features to reduce labor costs.

The net result of all this has been to create a plant which can produce the maximum output in yards per man-hour of high quality goods with a maximum reliability and a minimum of expense for maintenance.

A.S.Q.C. Textile Division Elects Officers

The Textile Division, American Society for Quality Control, at the annual meeting of the society held in Cleveland, Ohio, elected four new officers to serve until the middle of next year. They were: R. G. Mitchell, director of quality control, International Latex Corp., Dover, Del., chairman; R. E. Heiland, industrial engineer, Kurt-Salmon Associates, Washington, D. C., chairman-elect; W. S. McMann, assistant director, quality control, Dan River Mills, Danville, Va., secretary; and C. D. Ferris, Mohawk Carpet Mills, Amsterdam, N. Y., treasurer.

Belmont Textile School Slates Summer Classes

New classes will start at the North Carolina Vocational Textile School, Belmont, N. C., July 1 on the morning shift 8:20 a.m. to 1 p.m. This applies to all courses, namely: yarn manufacturing, weaving and designing, knitting, mill maintenance (machine shop) and tailoring. In the mill maintenance course, a new class will be started from 5 p.m. to 9:30 p.m. September 1, new classes will be started on both the morning and afternoon shifts. The afternoon shift runs from 2 p.m. to 6:30 p.m.

The Combed Yarn Spinners Association has announced it plans to hold its 34th annual convention this year on September 17-18. The meeting will be held at The Cloister, Sea Island, Ga.

S. C. Textile Men Hold Annual Meeting

Frederick B. Dent, president, Mayfair Mills, was re-elected president of the South Carolina Textile Manufacturers Association at the group's annual convention held May 28-30 in Sea Island, Ga. George P. McClenaghan, J. P. Stevens & Co., was elected vice-president. Re-elected were John Cuthen, Columbia, executive vice-president, and Miss Julia Kennerly, Columbia, secretary.

Dent paid tribute in his report to the late P. S. Bailey whom he succeeded as president of the association earlier this year. "It was he who set the course for the year and inspired the committees to achieve the effective service which is so noteworthy in retrospect," Dent declared.

Association directors elected were Andrew B. Calhoun, Equinox Mills; and Walter Regenery, Joanna Cotton Mills.

In citing achievements during the past year, Dent mentioned the association's role in bringing legislative changes in cotton acreage controls through formation of the South Carolina Cotton Promotion Committee; the effort made in drawing attention to undesirable proposals concerning the workmen's compensation law; and the appearance of association witnesses before a Senate subcommittee investigating problems of the textile industry.

Traffic Committee Report

Adjustments in charges for transportation during the past year have been very favorable on traffic to and from the textile mills in South Carolina, according to a report of the Traffic Committee to the association. Reductions have been much greater than any increases, and, in addition, there has been improvement in the competitive relation of rates to and from South Carolina points compared with points in other textile states, the committee reported.

Dr. William H. Miernyk, staff director for the Pastore Senate subcommittee which recently conducted exhaustive hearings into the problems of the industry, said in a speech before the group, "One of the significant economic phenomena of the past decade has been the long-term decline in textiles during a period of rapid economic growth."

The decline of textile production has not been uniform, but with one exception—fabrics made of the newer non-cellulosic fibers—it has been general, he said. The decline in cotton production was relatively modest, 2.9%, but the production of woolen and worsted broadwoven goods dropped 44%, he indicated. In synthetics, there was a decline

McClenaghan, Dent, Cauthen

Frederick B. Dent, president, Mayfair Mills, was re-elected president of the South Carolina Textile Manufacturers Association at the group's annual convention. George P. McClenaghan, J. P. Stevens & Co., is the newly-elected vice-president. Continuing as executive vice-president is John Cauthen of Columbia, S. C.

of 26% in the production of rayon and acetate fabrics. The only segment of the industry to register growth—and this was substantial—is that producing the newer synthetic fabrics where there was a 15-fold increase in production from 1947 to 1957, Miernyk said.

Causes Of Industry Decline

The major causes for this decline were divided by Miernyk into two causes—internal and external.

Under internal causes, Miernyk pointed out that many household items formerly made of cloth, such as napkins, drapes, tablecloths and other similar items, now made of paper or plastics. In addition, he said, changes in clothing styles have affected the demand for textile mill products. The elimination of vests in men's suits meant a sudden, sharp reduction in demand amounting to thousands of linear yards of woolen, worsted and rayon cloth.

There has been an even sharper decline in the industrial demand for textile mill products. Plastics, paper products, and various light metals have displaced many types of fabrics in industrial uses, he said.

Under the external causes, Miernyk noted that there were sharp shifts in the pattern of international trade in textile mill products. Between 1947 and 1957 shipments of cotton cloth to the U. S. rose 289%, while shipments from this country declined 48%. Some of these changes, he said, were probably inevitable, but to an extent the external causes are the result of various government policies.

Three principal government policies have affected the decline of the domestic textile industry, according to Miernyk: (1) liberalization of our foreign trade policy; (2) stimulation of growth of textile industries in other countries through our foreign aid program; and (3) the two-price cotton system which is a result of our agricultural price support program. Under the agricultural price support program American buyers of domestically produced cotton were required to pay about 20% more than the world price for the same cotton. This increased the competitive disadvantge of American mills, Miernyk said, and contributed, at least indirectly, to the rising tide of imports.

What of the long-term outlook in view of the past decade? Miernyk blamed three major factors for the decline in domestic textile production: (1) declining per capita consumption; (2) rising imports; and (3) declining exports.

Concerning declining per capita consumption Miernyk had this to say: "There is a good chance that through research, plus more aggressive merchandising, the textile industry can restore some of its lost household market, and further changes in clothing styles—such as the shift to casual wear of the past few years—will do little to reduce the per capita consumption of textile mill products in the form of apparel. I am not suggesting that the per capita consumption of textile mill products for personal and household uses cannot decline further. What I am saying is that the rate of decline during the next decade—if it occurs at all—will be less than that of the past decade."

On what is likely to happen to the demand for textiles for industrial uses Dr. Miernyk said, "In recent years the textile industry has begun to compete more aggressively and further research and experimentation should lead to

many new industrial uses for textiles, and in the future the industrial market should expand once more. Competition between textile and non-textile materials will continue. But it will be competitive, not simple substitution, as has been true so often in the past few years."

Import Situation

It is important to be realistic about future imports and exports in making a projection, he declared, and at the present time a reasonable assumption is that imports will continue to rise, but at a slower rate than the increase in the past decade. He added that despite our commitment to a program of greatly liberalized trade there is a growing body of opinion that the burden of rising imports should be more equitably shared than it has in the past; that the growing sectors of the economy should absorb a larger share than the declining sectors.

Exports are almost certain to decline during the years ahead, although at a slower rate than that of the past ten years. The decline rate has already slowed down. Exports dropped less between 1952 and 1957 than during the five preceding years, Miernyk said.

"Over the next ten years the long-term downward trend in textile production will be reversed. Between now and 1970, the population of this country is expected to increase by 25 per cent. There will be substantially larger increases in personal income, and in personal consumption expenditures. These powerful factors will more than offset declining per capita consumption and—in my opinion—the effects of moderate increases in imports and a slow decline in exports. New industrial uses will be developed which will help bolster the total demand for textile mill products. I expect that textile merchandising will become more aggressive, and that it will be more successful than it has been during the past decade," he said.

Structure Changes

One trend spotted by Dr. Miernyk is a slow but gradual change in the industrial structure of the textile industry. This, he said, is the trend toward fewer but relatively larger firms. It is necessary to emphasize that "I am not talking about larger mills, but about cases where more mills are brought together under the over-all management of a single concern. If this trend continues, as I expect it will, management will increasingly recognize that no firm in the industry gains in the long-run from an excess of price competition.

"Larger firms are more likely to spend substantial sums for research and development than small firms. And in my opinion the future of the domestic textile industry depends to a large extent upon an ever expanding research and development program. Thus, in the long-run the consumer should benefit from better products, made on better and faster machines, and these may even be sold at lower relative prices than those currently prevailing.

"There need be little fear of monopoly in textiles. There is very little likelihood that the number of firms in the industry will become extremely small. What is more likely is that there will be a relatively small number of large firms, with many hundreds or even thousands of smaller firms, but with the latter tending to follow more closely the production and pricing policies of the former.

"This projection of long-term growth, and greater sta-

bility, in textiles might appear over-optimistic to many. This view is based upon analysis of the factors which led to decline in the recent past, and their probable influence in the future. It also includes evaluation of those factors which contribute to economic growth. On balance, it is my opinion that the expansionist forces will outweigh those which lead to contraction," Miernyk said.

U.S.D.A. Honors Four Textile Scientists

Four textile scientists have received the U. S. Department of Agriculture Superior Service Award for their achievements in research on cotton. They are Mary L. Rollins, John J. Brown, Louis A. Fiori, and Verne W. Tripp. All four are members of the research staff of the Southern Utilization Research and Development Division, with headquarters at the Southern Regional Research Laboratory in New Orleans, La.

Miss Rollins and Tripp were honored for their accomplishments in the study of the structure and chemistry of the cotton fiber, according to the citation, "to improved textile processing through the development of significant basic knowledge of the microscopic and submicroscopic structure and behavior of cotton."

Brown and Fiori were cited for developments in textile engineering research "resulting in increased utilization of cotton through the recognition and application of fiber fineness in improving product quality, processing efficiency, and merchandising practices." The awards were presented at the annual U.S.D.A. award ceremony in Washington, D. C.

Japan Quota Increase Draws Sharp Criticism

Textile industry leaders have sharply criticized the increased Japanese quotas on imports to the U. S. The old quota which has been in force since 1957 amounted to 235,000,000 square yards per year. In 1959, Japanese imports to this country will be raised to 247,200,000 square yards.

Changes in the import agreements include:

(1) The definition of "ginghams" will be revised to include "gingham stripes," and the gingham quota will be increased from 35 to 40 million square yards.

(2) The ceiling for "fabrics made from combed warp and filling" will be increased from 26 to 30 million square yards.

(3) The quotas for Groups II, III, IV and V will be established at:

Group		1959 Quota (million square yards)	1957 Quota (million square yards)
II	made-up goods	33.0	30.0
III	woven apparel	78.1	71.0
IV	knitgoods	13.2	9.0
V	miscellaneous	9.9	9.0
	Total	134.2	122.0

(4) In 1959, the so-called flexibility clause will be applied to shifts of not more than 5% to Group II, IV or V, but will not be applied to permit shifts from Group I to the other groups or to permit shifts to Group III.

A.C.M.I. Reaction

A statement from American Cotton Manufacturers In-

stitute president, James A. Chapman, Inman (S. C.) Mills, indicated that group not only deplores the increased quotas but also feels that a reduction from 235 million square yards to 150 million square yards was called for by the terms of the previous agreements.

"It is extremely unfortunate that Japan has abandoned the principle upon which the voluntary quota arrangement was based at its inception," Chapman said. "It may be recalled that the program calling for an over-all ceiling of 235 million square yards a year was based on 1956 production, employment, profits and price levels. In our views," he said, "a ceiling of 150 million square yards was indicated as equitable.

"The agreement explaining the program included this provision: 'Anticipating that changes may well occur in the U. S. textile market within the next five years, these ceilings shall be the subject of annual reviews in which the Japanese Government will consult with the U. S. Government for the purpose of arriving at such adjustments, upward or downward, in the quotas as may be warranted by changed conditions.' Conditions in the U. S. market, indeed, have changed. In the past two years there has been additional deterioration in the market as reflected in each of the key factors. A decrease in Japanese imports seemed to be in keeping with the original principle. We had hoped Japan would arrange for more diversified textile and apparel shipments to lessen the damage to American industry. This, it seemed to us, would be in the best interests of both the U. S. and Japanese governments."

Chapman's statement concluded with, "It is imperative that this unrestricted and unfair competition be halted. Only through controls imposed by our Government can American productivity be preserved."

Keen Disappointment

W. J. Erwin, president, Dan River Mills, Danville, Va., expressed keen disappointment at the raised quotas. He noted such action was completely unrealistic, particularly when wage differentials between the two countries are taken into consideration. He said further this action on the part of the Japanese makes it even more necessary that the recommendations of the special Senate subcommittee be implemented.

Donald Comer Sr., Avondale Mills, Sylacauga, Ala., said it is obvious that Japan can't be allowed this freedom to our American markets. "Congress will surely have to take a hand," he said. "The American industry promoted, encouraged, styled, developed, modeled and advertised the cotton textile industry in this country and the Administration should not be allowed to trade it away to Asia for this and that," he noted. "If the Administration owes Japan anything in her economic problems," Comer concluded, "it should be a tax on all of us and not just a burden on one or two industries."

March Cotton Consumption Off April Pace

The daily average consumption of cotton in the U. S. during March was 34,503 bales which is below the 35,841 bale total reported for April, according to a release from the Bureau of the Census. Both monthly totals were well above the 29,198 bales per day consumed in April 1958. The cotton growing states used 33,073 bales per day in March 1959. This total is lower than the April 1958 total of 34,450 but much above the March 1958 total of 27,944. The New England states consumed 1,265 bales per day in March 1959; 1,222 bales in April 1959; and 1,078 bales in April 1958.

Wool Consumption Continues To Grow

The weekly average rate of fiber consumption on the woolen and worsted systems in April was 10% above the March rate and 50% above that of April 1958, according to the Bureau of the Census. The weekly average raw wool consumption during April was 9,252 thousand pounds (scoured basis) or 11% above the March level, and 76% above that of April 1958. Consumption of apparel class wool was 13% above the March level and 54% above that of April of last year. Consumption of carpet class wool was 8% above the rate of the preceding month and more than twice the April 1958 rate.

Rayon And Acetate Shipments, May 1959

United States producers shipped a total of 96,300,000 pounds of acetate yarn and rayon in May, a decline of 1½% from April but 30% above May 1958 deliveries, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau.

High tenacity viscose yarn deliveries amounted to 27,900,000 pounds, off 4% from April but well above the May 1958 level of 17,600,000 pounds. For regular+intermediate tenacity rayon yarn, shipments at 14,300,000 pounds were off 13% from April but were 11½% above May last year. Acetate yarn shipments at 19,700,000 pounds were off 4½% from April but slightly above May 1958. Rayon staple+tow deliveries totaled 34,400,000 pounds in May, an increase of 8½% over April and 39½% greater than May 1958 shipments.

Woolen Fiber Consumption, April 1959

The weekly average rate of fiber consumption on the woolen and worsted systems in April was 10% above the March rate and 50% above that of April 1958, according to figures released June 3 by the Bureau of the Census.

The weekly average raw wool consumption during April was 9,252 thousand pounds (scoured basis) or 11% above the March level, and 76% above that of April 1958. Consumption of apparel class wool was 13% above the March level and 54% above that of April of last year. Consumption of carpet class wool was 8% above the rate of the preceding month and more than twice the April 1958 rate.

Consumption of fibers other than raw wool averaged 7,256 thousand pounds per week, or 9% above the March average and 26% above April 1958. These figures include production of man-made fiber tow converted to top without combing. Total fiber consumption also includes this top production.

Honors, Elections, Activities

PERSONAL NEWS

formerly superintendent of manufactur-. Marion Kirby has been named to suc-d Reinhardt as superintendent of manu-turing for Catlin Farish. Kirby joins the npany from Wennonah Cotton Mills, Lex-ton, N. C.

Harry K. Smyth, vice-president of Saco-well Shops, Boston, Mass., and assistant the general manager of both its textile chinery division at Easley, S. C., and its r and machine division at Sanford, N. , at his request has been relieved of his erating duties because of ill health. He v is on leave. . . . Royden Walters, Bos-

Harry K. Smyth

Royden Walters

on based Saco-Lowell vice-president, will become, in addition to his post of executive assistant to the president, executive vice-president and assistant general manager of both the Easley and Sanford operations. . . . Henry A. Jewell, who has been director of procurement and material control at Boston, will become works manager of the Saco-Lowell textile machinery division at Eas-at Sanford, N. C. . . . Leo Cartier, who recently joined Saco-Lowell's Boston staff, will move to Sanford to become assistant works manager under Haug. Cartier came to Saco-Lowell from the Marvel Schebler Division of Borg-Warner, at Decatur, Ill., where he was assistant works manager. Previously he had held various quality control, engineering and manufacturing posts.

mill at Tuxedo, N. C. E. R. McCurry has been named general overseer, succeeding Musser.

Harry Nelson Jr., president of Morehead Cotton Mills, Spray, N. C., has been elected mayor of Spray. Nelson is a former mayor of the town.

Robert C. Reinhardt Jr. has been named vice-president of manufacturing for the newly reorganized Catlin Farish Co., a division of Burlington Industries. The division operates ticking manufacturing plants at Batesburg and Lexington, S. C. Reinhardt has been with the company for 13 years and

Richard B. Kelly, plant chemist and supervisor of dyeing at Burlington Industries May Hosiery Finishing Co., Burlington, N. C., has resigned to join High Point Chemical Co., High Point, N. C. A graduate of North Carolina State College with a degree in textile chemistry and dyeing, Kelly in his new post will expedite production and co-ordinate the activities of the production and quality control departments.

Jesse A. Boyce, assistant manager of the Durham, N. C., plants of Erwin Mills, has been presented a certificate by the Durham City Council honoring his voluntary service to public recreation in the community.

C. M. Ehrhardt, Midwestern business executive for Saco-Lowell Shops, Boston, Mass., has been named to the newly-created post of director of management services. Ehrhardt has had experience in engineering, production, development and sales, and has served as both vice-president and treasurer. He has been affiliated with such firms as Long Mfg. Division of Borg-Warner; Muncie Gear Works of Muncie Ind., etc.

Elmer J. McVey

Elmer J. McVey has been elected vice-president of Atkinson, Haserick & Co. Inc., textile machinery importers of Framingham, Mass., and sole American agent of Platt Bros. (Sales) Co. Ltd. of Oldham, England. McVey will be sales manager of the Platt Machinery Division with offices in Greenville, S. C., and Pawtucket where a showroom is being installed. McVey was formerly vice-president and assistant general manager of the textile machinery division of Saco-Lowell Shops with whom he had been associated eight years. Prior to that he was executive vice-president of H & B American Machine Co. with whom he was associated 29 years. Harold V. Farnsworth continues as vice-president and general manager of the Platt Machinery Division of Atkinson, Haserick.

Griffin S. Mackey has recently been employed by the Arkansas Co. of Newark, N. J., in its sales promotional division to cover the New York City area for the promotion of Resipon N D C, new wash-and-wear resin. Mackey will also work with the sales division and advertising department in

the promotion of other textile auxiliaries which the Arkansas Co. has developed. Mackey has had many years of experience in selling dyeing and finishing service to textile weaving mills, converters and jobbers.

Homer M. Carter has been named executive vice-president of Pepperell Mfg. Co., New York City. Carter is general manager of the Alabama Division of Pepperell. . . . Robert B. Horsley succeeds Carter as general manager of the entire division. He is presently serving as manager of the cotton mill section of the Alabama Division.

J. A. McArthur has resigned as controller of Monarch Mills, Union, S. C., in order to accept a similar position with the worsted division of Milliken Mills at Pendleton, S. C. McArthur joined Monarch in 1947. He served for four years as office manager before being named controller. . . . W. E. Boyett has been named to succeed McArthur as controller of Monarch. Boyett joined Monarch a year ago. Previously he was associated with Coats & Clark Inc.

Robert Feigin has joined the research staff of The Tanatex Chemical Corp., Kearny, N. J., as senior research chemist. He was formerly assistant to the technical director of Anderson Oil & Chemical Co. and previous to that was with Alrose Chemical Co. as chief chemist in charge of technical service and application. . . . Jacob Fox joins the company's research staff as assistant research chemist. He is a member of The American Chemical Society. He was previously supervisory chemist for the Army Pictorial Center.

Richard K. Thompson has been appointed sales representative in Greenville, S. C. for Johnson Motor Lines and Atlantic States Motor Lines.

Charles Amidon Jr.

Charles H. Amidon Jr. has been named chief engineer of Foster Machine Co., Westfield, Mass. Amidon will handle the administrative duties of the office as well as supervising the over-all efforts of the engineering department. He will also be a member of Foster's new product development committee and brings with him considerable experience in the evaluation and application of new products. He is a graduate of Worcester Polytechnical Institute and a member of the American Society of Mechanical Engineers.

John G. Broughton Jr. has been named to the newly-created position of field sales manager of the organic chemicals division, Dewey & Almy Chemical Division, W. R. Grace & Co., Cambridge, Mass. Broughton, who has been Eastern regional sales manager since 1955, will have direct charge of the national sales force from Cambridge headquarters. . . . Arthur D. Patrick will succeed Broughton as Eastern manager. He had been a sales representative. His headquarters will be at Clifton, N. J. . . . Amos J. Miner has been appointed Midwest regional sales manager at Chicago, Ill.

John M. Feeley, formerly sales manager for Dixon Corp., Bristol, R. I., has been named vice-president in charge of sales. Feeley will be responsible for sales offices in the South, selling saddle guide changeovers for modernizing spinning frames.

C. E. (Bill) Anderson, manager of Excelsior Mills, has been promoted to merchandising manager. . . . Edwin D. Shaw Jr. will succeed Anderson as plant manager. . . . Gene Hanes was elevated to the post of production planning manager. Hanes formerly served as technical superintendent of the plant.

John J. Barnhardt Jr. has been named Atlanta dyes sales supervisor of the Southern district office of Du Pont's dyes and chemicals division. Barnhardt joined the company in 1946 as a technical sales trainee at its dyes and chemicals division technical laboratory. A year and a half later he was transferred to the Charlotte district. In 1952, he was named dyes salesman in the Greensboro, N. C., territory and early in 1958 became manager of the division's textile section in the home office at Wilmington, Del. . . . Harold L. Sager has been named to succeed Barnhardt as manager of the textile dyes section in Wilmington, Del. Sager joined Du Pont as a sales trainee at the

dyes and chemicals division technical laboratory in 1939, immediately after obtaining his bachelor of science degree in chemistry from the University of North Carolina. He was named a dyes salesmen in the Providence, R. I., district in 1946. He was assistant sales manager of the New England district of the dyes and chemicals division from 1953 to 1955. For the last two years, he has been on a special technical assignment in Wilmington.

J. D. Allen, formerly production superintendent of Pacolet Mills, Gainesville, Ga., has been transferred to the company's Pacolet, S. C., plant as production superintendent and acting manager. He succeeds C. T. Holland, who has been transferred to the Gainesville plant as production superintendent.

Dr. Milton Harris, president of Harris Research Laboratories Inc., Washington, D. C., was elected president-elect of the American Institute of Chemists at its annual meeting held recently in Atlantic City, N. J.

C. W. Sartain has been appointed cloth room overseer at Starr (S. C.) Mills Corp.

J. H. Richardson

James H. Richardson has been named to the board and to the position of treasurer of the Draper Corp., Hopedale, Mass. He will fill the vacancy on the board created by the resignation of Claude F. Snider, who is retiring for reasons of health. Richardson joined Draper as assistant treasurer in June 1952. Prior to joining Draper, he was a manager of the Boston office of Price Waterhouse & Co.

National Starch & Chemical Corp. has announced relocations affecting two of its textile starch sales representatives. They are Edward Maslanka, who has been reassigned from New England to the company's Southeastern Division, and Joseph J. Ducharme, who has moved from the West Coast to take over accounts and territory previously serviced by Maslanka. Maslanka, who will now be handling textile accounts in the Southern part of the country, has been with the company since 1947. Starting as a textile chemist, he was transferred to New England textile sales in 1948. He graduated from Lowell Textile Institute in 1940 with a B. S. degree in textile chemistry. Ducharme will come to his new assignment from work in the company's West Coast Division. Upon graduation from Lowell Textile Institute in 1951 as a textile chemist, he joined the textile development group of National Starch. He has been located at San Francisco since 1953.

Barry Hayes, vice-president and general manager of Arkwright (S. C.) Mills, has been named a director of the Spartanburg Chamber of Commerce.

Dr. Valko

Dr. Emery I. Valko has been named recipient for the 1959 Olney Medal of the American Association of Textile Chemists & Colorists. The A. A. T. C. C. awards the Olney Medal annually for outstanding achievement in the field of textile chemistry, including the development of chemical agents or chemical processes used in the manufacture of textiles, or methods for their evaluation. Its purposes are to encourage and to afford public recognition of such achievements and contributions, and to be a testimonial to Dr. Louis Atwell Olney in recognition of his lifetime of devotion and multitudinous contributions to this field. Dr. Valko, a native of Hungary and a U. S. citizen, has been a professor in the division of chemistry at Lowell Technological Institute since 1958. Prior business experience includes: vice-president of research and development at Onyx Oil & Chemical Co.; research consultant to chemical, textile and cosmetic industries; director of research at E. F. Drew & Co.; research chemist at I. G. Farbenindustrie, Ludwigshafen, Germany; and research associate at the University of Vienna.

Don Cannon has been named sales and service representative for the High Point Chemical Co., High Point, N. C. Cannon was formerly associated with the textile sales division of Procter & Gamble. He is a graduate of the Philadelphia Textile Institute.

Dr. C. Eugene Coke has been appointed director of research and development for Hartford Rayon Co., a division of Bigelow-Sanford Carpet Co., New York City. Dr. Coke previously was manager of development for Courtalds (Canada) Ltd., where he filled major assignments in applied research of end-use products. He has written more than 40 papers for technical journals on the subjects of man-made fibers and nonwoven fabrics. Dr. Coke is a fellow of the Royal Institute of Chemistry, Chemical Institute of Canada, The Textile Institute, Society of Dyers & Colourists, and the American Association for the Advancement of Science.

Walter M. Mitchell

Walter M. Mitchell, vice-president of The Draper Corp., Hopedale, Mass., received Georgia Tech's 1959 Alumni Distinguished Service Award at the school's 76th commencement ceremonies June 13. The award was presented to Mitchell by Dr. Edwin D. Harrison, president of Georgia Tech, in recognition of his devotion to the school and the cause of higher education as exemplified in his service as president of the Georgia Tech Foundation.

J. P. Holder, formerly maintenance superintendent for Dan River Mills plants in Alabama, has been named superintendent of the firm's Greenville, Ala., plant.

Frank B. Grimes has been named sales manager of Union Bag-Camp Paper Corp.'s corrugated container plant now being constructed at Spartanburg, S. C. Grimes will assume his new duties on August 1, and will establish his residence in Spartanburg at that time. The plant is expected to begin operations the latter part of the year. A member of Union-Camp's corrugated con-

tainer sales division since 1948, Grimes served most recently as assistant sales manager of the company's corrugated container plant in Savannah, Ga.

John P. Baum, vice-president of J. P. Stevens & Co., has been named treasurer of the Textile Manufacturers Association of Georgia at that group's recent annual convention. Baum succeeds Paul K. McKinney Jr., vice-president and controller of Swift Mfg. Co., Columbus, Ga., who was named vice-president.

Walter S. Montgomery, president and treasurer of Spartan Mills, Spartanburg, S. C., has been re-elected vice-president of the National Council on Community Foundations.

A. Welling LaGrone has been named vice-president of Seydel-Woolley & Co., Atlanta, Ga., manufacturer of textile chemicals. LaGrone, a native of South Carolina and a graduate of the textile school of Clemson College, was in the purchasing department of Kendall Mills before the war. After a career in the Army, from which he retired as a major, LaGrone joined Seydel-Woolley as a trainee salesman. He rose to manager of sales in the Carolina territory of the firm's sizing division. LaGrone will be in charge of sizing sales for the U. S. and Canada.

OBITUARIES

Joel R. Abney, 63, retired textile executive died June 4. Before his retirement he had been president and owner of Julia Cade Mills in Albertville, Ala. Previously, Mr. Abney had been an executive with mills in Greenwood and Anderson, S. C. Raised in Greenwood, he attended school at Alabama Polytechnic Institute, Auburn. He is survived by his widow, a son and a daughter.

Henry C. Ball, 61, executive vice-president of the Tufted Textile Manufacturers Association, died at his home in Dalton, Ga., recently after several months of ill health. Mr. Ball had a varied career. He had served the T.T.M.A. as executive secretary since its founding in 1945.

Raymond V. Borden, a former president of Sterling Ring & Traveler Co., Fall River, Mass., and later with National Ring Traveler Co., Pawtucket, R. I., died recently. Mr. Borden had been employed in Greenville, S. C., as office manager of the U. S. Ring & Traveler Co., Fall River, Mass.

Guy Leroy Morrison, sales representative for Penick & Ford Ltd. Inc., Spartanburg, S. C., died unexpectedly June 4 at his home in Spartanburg.

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

NEW YORK, N. Y.—Beaunit Mills Inc. reported it had a 13.4% decline in net profits and a sales increase of 2.5% in its fiscal year ended March 31, but sees a substantial increase in the first quarter of the new fiscal year. The lower earnings were attributed to a material decline in tire yarn and tire cord sales last year. Estimates are for first quarter earnings of 80 to 90 cents per share for the new fiscal year. The last fiscal year showed earnings of 16 cents per share. Total sales for the first quarter are estimated at approximately $30 million compared to the $20,339,000 sales volume in the first quarter last year.

BRUNSWICK, N. C.—Roberts Co.'s new long fiber spinning frame, the Arrow WM-2, has been selected to equip the new knitting yarn plant to be built by National Spinning Co. here. Initial contracts call for installation of 12 full length frames. The 75,000-square-foot brick and steel plant is scheduled to start operations this Fall. Philip Leff, president of National Spinning, said the new plant will make both synthetic and wool knitting yarns and will add between $4 and $5 million to North Carolina's gross product. The new plant will employ about 125 persons and will have an annual payroll in excess of $300,000.

NEW YORK, N. Y.—Borden Mills Inc. and J. P. Stevens & Co. have announced the acquisition by Stevens of the manufacturing facilities of Borden Mills, Kingsport, Tenn. A spokesman for Stevens said, "The operations of the plant at Kingsport will continue uninterruptedly and all outstanding contracts will be delivered as scheduled."

CHATTANOOGA, TENN.—Roxbury Carpet Co. will spend more than $100,000 in 1959 for modernization and new equipment at its Roxbury Southern Mills here to strengthen the company's output of tufted floor coverings, according to a joint announcement by Charles B. Anderson, president of Roxbury Carpet Co., and Glenn H. Plumlee, president of Roxbury Southern Mills. Roxbury Southern Mills is a wholly-owned subsidiary of Roxbury Carpet Co. The new capital expenditure will partially be allocated to equipment permitting the addition of patterns in tufted carpets in conformity with the trends in these products. The expenditure will also aid the development of foam rubber floor covering at the mill.

GREENSBORO, N. C.—The newly-reorganized Catlin Farish Co., a division of Burlington Industries here, will take over operation of manufacturing plants at Batesburg and Lexington, S. C. The two mills, formerly operated under the B. I. Cotton Mills division of Burlington, will be known as Catlin Farish manufacturing plants. They will produce wide fancy tickings. The two plants are being completely modernized. While the total output will remain about the same, production of wide fancy tickings will be increased and that of narrow staple goods decreased. The new division will have sales headquarters in New York City.

ROCK HILL, S. C.—Calyton-Every Rug Mill is liquidating its yarn spinning division here. The firm is offering the operation as a complete unit or in individual pieces. The mill was founded in 1939 as Samakand Yarn Mills. Clayton-Every purchased the mill in 1952. Alltex Machinery Corp., New York City, has been named to handle the liquidation of equipment.

NEW YORK, N. Y.—Royal Little, board chairman of Textron Inc., and G. David Thompson, chairman of Pittsburgh Steel Foundry Corp., have jointly announced that subject to requisite action by Pittsburgh Steel stockholders, Textron has agreed to purchase the assets, properties and business and assume the liabilities of Pittsburgh Steel for a price equal to $15.50 per share. There are 357,251 shares of the corporation's stock outstanding. Founded in 1898, Pittsburgh Steel has plants in Glassport and McKeesport, Pa.

NEW YORK, N. Y.—J. P. Stevens & Co. has been appointed to sell the print cloth production of Berkley Mills, Balfour, N. C. Berkley operates 1,000 looms and is a part of the Kimberly-Clark Corp., Neenah, Wis.

DANVILLE, VA. — Schoolfield Finishing Plant, commission finishing unit of Dan River Mills here, has been chartered as a corporation, and beginning early in July will be known as Schoolfield Finishers Inc. The Schoolfield Finishing Plant was established less than a year ago as a division of Dan River with Stanley Foster as sales manager. Foster, newly-elected executive vice-

MILL NEWS

president of Schoolfield Finishers Inc., stated that the rapid expansion of commission finishing volume was the principal reason for re-organizing Schoolfield Finishing Plant as a separate corporate subsidiary of Dan River Mills. Headquarters of Schoolfield Finishers Inc. will continue to be at 111 West 40th Street, New York City, present sales office for Schoolfield Finishing Plant.

ROCKINGHAM, N. C.—Work on additions to Hannah Pickett Plant of the woolen and worsted division, J. P. Stevens & Co. here, is expected to be completed by September 1. The additions were designed by the Stevens engineering department at Milledgeville, Ga. Construction work is being done by Fiske-Carter Construction Co., Greenville, S. C.

NEW YORK, N. Y.—The board of directors of Textron Inc. have declared a dividend on the convertible preferred stock of the corporation of 31¼ cents per share and raised the dividend on the common stock of the corporation from 25 cents per share, which had been paid since April 1, 1957, to 31¼ cents per share. Both such dividends are payable July 1 to holders of record at the close of business on June 15. This places the common stock dividend on a $1.25 yearly basis as against the previous dividend of $1.

LANCASTER, S. C.—Construction has begun on the new 160x180-foot expansion of the bleaching and dyeing operations of Springs Cotton Mills here. The new facility is part of a $5 million program expected to provide jobs for an additional 1,000 persons.

INMAN, S. C.—Inman Mills here has announced a $3 million construction program which will include the erection of an additional building and will provide approximately 100 more jobs. The program is designed to allow the company to take advantage of machinery improvements which have come about in recent years and to allow for rearrangement of machinery.

WELLFORD, S. C. — Jackson Mills here has planned an extensive plant improvement program costing approximately $1 million. Improvements will include machinery additions and changes in drawing and several other departments. Fourteen cards will be added. The project will also add 75 to 100 jobs to the present 350.

NEW YORK, N. Y.—Dan River Mills expects to be in its new quarters at 111 West 40th Street by the end of June, according to Harry Ferguson, vice-president of merchandising and sales for the company. The company will occupy the 12th and 13th floors of the building. Dan River's present New York office is located at 1407 Broadway.

FITZGERALD, GA.—The Textile Workers Union of America has called a strike against Fitzgerald Mills Corp here. The dispute is reported to be over wages, seniority, work loads, vacations and grievances. The mill is continuing in operation despite the strike.

TIFTON, GA. — Peerless Woolen Mills here has awarded a general contract for construction of a new 200,000-square-foot building to Barger Construction Co., Mooresville, N. C. The new mill will be of brick, steel and concrete construction and will be completely air-conditioned. It will be one-story and will be windowless. The new mill will employ about 500 persons. Present Peerless operations here employ some 130 persons.

PICKENS, S. C.—Fairhaven Mills here is planning to construct a $250,000 plant containing 13,000 square feet of space. Some 100 persons will be employed in the blended yarn spinning plant.

NEW YORK, N. Y.—For the three months ended May 2, 1959, consolidated net sales for J. P. Stevens & Co. here were $113,964,507 compared with $88,893,757 for the corresponding three months of last year. Consolidated net earnings for this period, after provision of $255,000 for state income taxes, are estimated at $5,241,873, equivalent to $1.25 per share. No provision for federal income taxes has been made for either the first or second quarterly periods because of the availability of loss carryovers and other tax deductions. On May 2 the company reached an agreement for the acquisition of the manufacturing facilities of Borden Mills, Kingsport, Tenn., for cash. This plant's production of premium quality print cloths will represent a new and important addition to the company's already established cotton goods lines, Stevens reports.

Vol. 85 JUNE 1959 No. 6

textile bulletin

TEXTILE BULLETIN IS PUBLISHED MONTHLY BY

CLARK PUBLISHING COMPANY

— Offices and Plant: 218 West Morehead Street, Charlotte 6 —
P. O. Box 1225 • CHARLOTTE 1, N. C. • Tel. EDison 3-3173

Editor . . . . . JACK KISSIAH
Associate Editor . . . . . GUS GUGGENHEIM
Associate Editor . . . . . DEMONT ROSEMAN JR.
Assistant Editor . . . . . JOHN V. LAWING
Consulting Editor . . . . . WILLIAM C. DODSON
Inquiry & Reader Service . . . . . ANNE ABERNATHY

JUNIUS M. SMITH . . . . . *President and General Manager*
F. R. CAREY . . . . . *Vice-President and Eastern Manager*
(P. O. Box 133, Providence, R. I.—Telephone TUrner 4-9624)
MARGARET R. ELLIOTT . . . . . *Secretary-Treasurer*
JAMES L. PRENDERGAST . . . . . *Advertising Representative*
JAMES W. ROBINSON . . . . . *Circulation Manager*
MIRIAM W. SCRUGGS . . . . . *Production Manager*
BEN C. THOMAS . . . . . *Field Circulation Representative*

TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

MEMBER: Business Publication Audit of Circulation and National Business Publications Inc.

It's Not A Story Until It's Told

ANOTHER voice has been added to the clamor for better communications within the textile industry. John Harden, Greensboro, N. C., public relations consultant, told the Greater Charlotte Textile Club June 15 that an industry situation, such as the one now existing at Henderson, N. C., more often comes from a lack of communications than any other reason. He said the biggest single industry in North Carolina, having more employees, involving the biggest investment, and touching more people than any other industry, hasn't always told its story properly.

The industry and every company in it has a story to tell, he said. Some companies tell their story well and others do a fair job. However, he said, entirely too many companies don't tell their story at all. They don't even make an effort.

Companies and manufacturing plants must win and hold public understanding in today's world, if we are to survive, Harden said. Good public relations practices seek to build understanding and that is desirable because people are prone to like that which they understand. And he pointed out, by the same rule, dislike or at least distrust that which they do not understand.

We agree wholeheartedly with Harden and hope that he has great success in his efforts to make the industry more public opinion conscious. The textile industry has a good story to tell, but it must understand that *it's not a story until it's told.*

The Nazis and Communists understand the importance of public opinion. You probably can't find many Germans, now, who admit they supported Hitler during his grab for power back in the early 30's. But he couldn't have done it without a measure of public support. The Russians can rape a city like Budapest and twist the story around until it sounds as though they were merely saving the peasants from the ravages of a capitalistic revolt. They operate on the theory that a lie is believable and becomes as the truth if it is big enough and if it is told often enough. The Communists know that propaganda supplied them and still supplies them with money, public support and fighting men.

A war for men's minds has been raging between the U. S. and Russia for years. It is a really furious fight because both governments realize that in spite of rockets, missiles and H-bombs, world public opinion is the most important weapon a country can have on its side.

Labor unions throughout the U. S. know the value of good public opinion. The so-called "unemployment march" Walter Reuther, president of the United Auto Workers Union, sprung on Washington a few months ago wasn't just done for the exercise. It was done to focus the attention of the U. S. public on the fact that there was excessive unemployment and the U.A.W. was doing something about it.

Everyone knows the union can't force a company to create jobs and then give them to people. The union can't force the company to make money and give people pay raises. The truth is, the company supplies people with jobs. The company makes the profit and pays wages and allows wage increases. The question is: Why doesn't the company tell people about it?

To The Taxpayer — A $59,204 Bill

AS might have been expected, the taxpayer is taking the biggest beating of all in the state of North Carolina because of the strike against the Harriet-Henderson Cotton Mills, Henderson, N. C., by the Textile Workers Union of America. Unreasonable union demands brought the long and disastrous strike on at Henderson. Picket line violence brought on a break-down of local police effectiveness which resulted in the calling out of the North Carolina National Guard by Gov. Luther Hodges. The first two weeks of guard duty in Henderson brought a bill of $59,204 to the taxpayers of the state.

The $59,204 cost covered the period between May 12 and May 25. Wages took the biggest bite, $49,145.

Groceries accounted for $5,714. Gasoline was next at $1,549. The laundry and dry cleaning bill amounted to $2,244. A reduction of the size of the guard has reduced the taxpayer's bill to only around $25,000 per week. The present legislature of North Carolina has appropriated $750,000 for keeping the peace at Henderson.

Why does the T.W.U.A. insist on holding out for an obviously lost cause? The T.W.U.A., eight of whose members, including Boyd Payton, the Carolinas director, are currently under Grand Jury indictment for plotting the demolition of a power sub-station feeding the Harriet-Henderson Cotton Mills, has said it intends to sit tight and wait until the guard leaves Henderson. Does this mean they then intend to start the picket line violence all over again?

A Significant Announcement

A joint announcement made June 12 by Edda International Corp., New York City, and Abney Mills, Greenwood, S. C., may prove to be highly significant to the textile industry in the future. The companies reported they had reached an agreement for the manufacture and sale in the U. S. and Canada of the revolutionary new Maxbo non-shuttle loom (See TEXTILE BULLETIN December 1958, P. 58). The sale of the loom will be handled by Edda and the actual manufacture of the loom will be done by Abney through its Southeastern Loom & Machine Works, Greenwood.

The Maxbo non-shuttle loom, first exhibited at the Manchester Fair in England in 1958, is based on the inventions of Max Paabo of Norrkoping, Sweden, in conjunction with the Swedish Co-Operative Societies. The first patent was granted in the U. S. several years ago. First models for the U. S. market are expected to be displayed in August or early September, according to Edda.

The filling is blown through the shed of the Maxbo loom by air compressed through a nozzle. A suction device on the other end of the loom holds each pick in place. The elimination of the shuttle, battery, raceboard, picker stick, and other parts connected with the use of a shuttle has led to a redesign of the remaining conventional loom parts, according to the announcement. As a result, the Maxbo loom has fewer working parts and requires considerably less floor space than the conventional loom.

The loom has automatic self-lubrication, according to the announcement, and is practically vibration-free. The use of a suction device to hold the filling is said to make possible the drawing off of lint into a central container thereby reducing the amount of lint present in the weave room. Filling yarn is drawn from large packages at a consistent speed by a measuring roll and each pick is cut before it is inserted in the shed.

The loom, which has only about half as many parts as a conventional loom, is reported to operate at a speed of 330 picks per minute on 40-inch widths. Narrower looms are said to run at proportionately higher speeds.

The announcement of the agreement between Edda and Abney is most interesting and will bear watching in the future.

Two Down And Eight To Go

WELCOME news for the textile industry is that a Senate Appropriations subcommittee has allotted $200,000 to step up statistical research for the textile industry. This is the second of the ten recommendations made by Senator Pastore's Senate subcommittee which made a study of the textile industry some months ago to get official action. The first recommendation was the establishment of the Federal Inter-Agency Committee on textile problems.

We applaud the approval of the new funds. More complete statistics will allow manufacturers to schedule their production more evenly. This will moderate some of the highs and lows in mill operation which prove uncomfortable to both management and workers alike.

The Commerce Department had asked for $500,000 to carry out the statistical studies. This figure was sliced to the final $200,000 by the Senate. The Senate group's action must now be sustained by a conference of members of the two houses of Congress. We hope the conference action is both speedy and in favor of the allocation.

TEXTILE INDUSTRY SCHEDULE

— 1959 —

Sept. 10-11 (Th-F)—Fall meeting, **THE FIBER SOCIETY**, Textile Research Institute, Princeton, N. J.

Sept. 17-18 (Th-F)—34th Annual Convention, **THE COMBED YARN SPINNERS ASSOCIATION**, The Cloister, Sea Island, Ga.

Sept. 17-18 (Th-F)—Annual outing, **CHATTANOOGA YARN ASSOCIATION**, The Read House, Chattanooga, Tenn.

Oct. 1-2 (Th-F)—Fall meeting, **TEXTILE QUALITY CONTROL ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Oct. 3 (Sa)—Fall meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA** (Slashing & Weaving), Hightower Textile Building, Georgia Tech, Atlanta.

Oct. 7 (W)—**CHEMICAL FINISHING CONFERENCE**, sponsored by the National Cotton Council, Mayflower Hotel, Washington, D. C.

Oct. 8-9 (Th-F)—Fall meeting, **SOUTHERN TEXTILE METHODS & STANDARDS ASSOCIATION**, The Clemson House, Clemson, S. C.

Oct. 8-10 (Th-Sa)—Annual national convention, **A.A.T.C.C.**, Sheraton Park and Shoreham Hotels, Washington, D. C.

Oct. 10 (Sa)—Fall general meeting, **ALABAMA TEXTILE OPERATING EXECUTIVES** (Carding and Spinning), Langdon Hall, Alabama Polytechnic Institute, Auburn, Ala.

Oct. 17 (Sa)—Annual meeting, **(GEORGIA) TEXTILE EDUCATION FOUNDATION**, A. French Textile School, Georgia Tech, Atlanta.

Oct. 27-28 (Tu-W)—Technical Advisory Committee meeting and Board of Trustees meeting, **INSTITUTE OF TEXTILE TECHNOLOGY**, Charlottesville, Va.

— 1960 —

Apr. 7-9 (Th-Sa)—Annual meeting, **AMERICAN COTTON MANUFACTURERS INSTITUTE**, Americana Hotel, Bal Harbour, Fla.

May 23-27 (M-F)—**AMERICAN TEXTILE MACHINERY EXHIBITION**, Atlantic City, N. J.

May 31-June 2 (Tu-Th)—11th Annual **COTTON RESEARCH CLINIC** (sponsored by The National Cotton Council), Grove Park Inn, Asheville, N. C.

June 23-25 (Th-Sa)—52nd annual convention, **SOUTHERN TEXTILE ASSOCIATION**, The Grove Park Inn, Asheville, N. C.

Oct. 3-7 (M-F)—The 21st **SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday

CLASSIFIED ADVERTISING

Index to Advertisers

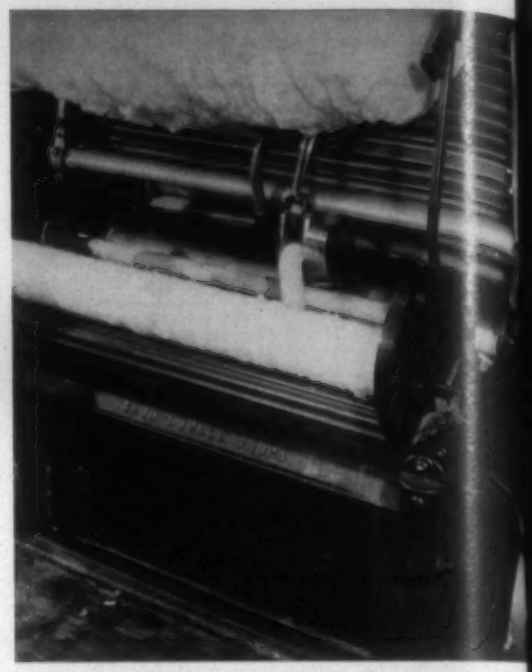
VOL. 85 JUNE 1959 NO. 6

This issue of TEXTILE BULLETIN . . .

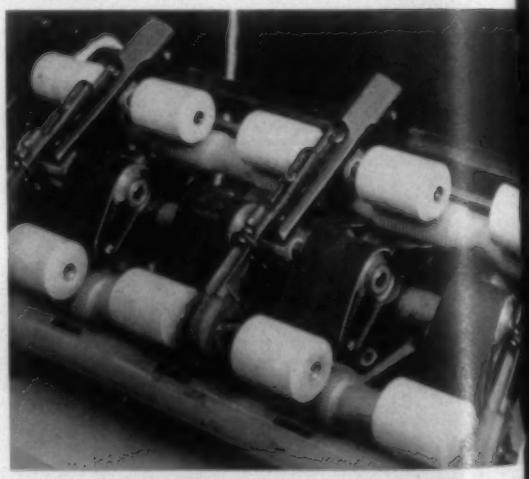
. . . spotlights:

. . . features

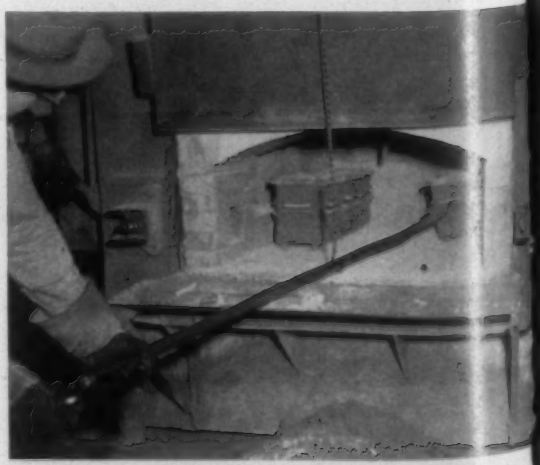
. . . and includes



Pneumafil's Constant Card, Page 12

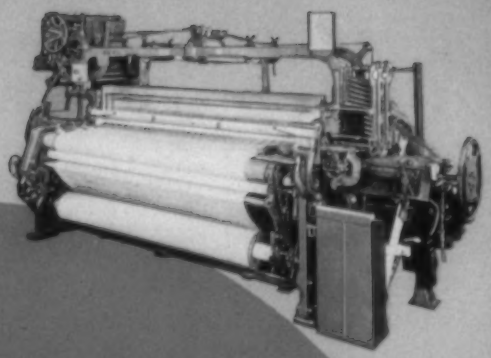


Spinning Changeover, Page 51



Carter Travelers, Page 60

Stehedco PRODUCTS Are The Heart of EVERY LOOM



Stehedco products are designed and manufactured to weave better quality fabrics with greater economy.

The drop wires and electrodes supplied by Stehedco meet your most rigid requirements, in any type, size and style.

Whether you use Stehedco Drawtex or conventional type harness, you get the finest quality and the latest developments for improving your production and economy.

The Southern Shuttles Division of Stehedco has earned the world's leadership in the manufacture of every type of shuttle. Many new types have been introduced by Southern Shuttles to give you longer trouble-free performance.

Stehedco picker sticks are designed to give you unequaled service and need fewer replacements, with a complete line to meet every requirement.

Stehedco reeds are recognized as the finest in the world, and whether you use all metal or pitch band, stainless steel or regular, you can be very sure that they are made with the utmost precision and quality to give you the longest trouble-free service.

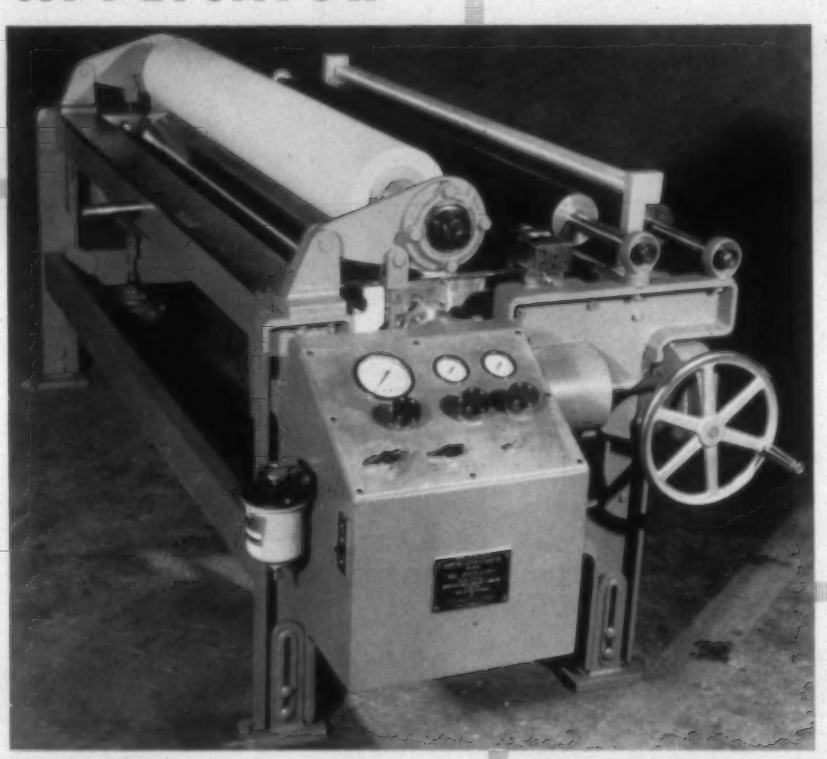
Ask one of our qualified field engineers to show how you can profit more with Stehedco products.

Stehedco
STEEL HEDDLE MFG. CO.
PHILADELPHIA 32, PA.
SOUTHERN SHUTTLE DIV.
GREENVILLE, S.C.
Southern

Other Plants and Offices: Granby, Quebec, Canada • Lawrence, Mass. • Greensboro, N.C. • Atlanta, Ga. • Textile Supply Co., Dallas, Texas • Albert R. Breen, Chicago, Ill.

K-5825

GRIFFIN
SIZE APPLICATOR



Patents No. 2,698,983, No. 2,698,985,
No. 2,763,912, No. 2,794,236,
and others pending

ECONOMY
MODEL

The ECONOMY Model of the GRIFFIN SIZE APPLICATOR is NOW available. It has the same basic design, same dependability, and most of the exclusive features.

Your weaving production will be increased by this ECONOMY Model of the GRIFFIN SIZE APPLICATOR—and at less cost—through new, exclusive IMMERSION-SQUEEZE ROLL SIZING. Squeeze roll pressures are adjustable at all speeds and for all styles.

Through GRIFFIN'S exclusive sizing control, the same percentage of size is applied to all ends, and from beginning to end of each set. There is no rolling, taping or ribbon formation. There is no loose yarn in the size. It is always in contact with driven rolls and never under tension.

With insulated size pan, it retains the heat and requires less steam. Suitable for all types of size for synthetic fibres as well as cotton and wool.

Why not talk it over with your GRIFFIN representative—he is a CONTROLLED SIZING specialist—and find out how this ECONOMY Model GRIFFIN SIZE APPLICATOR may be the most economical machine for you.

Write, wire or phone for information about how the ECONOMY Model SIZE APPLICATOR will save you time and money.

Exclusive LICENSEES

IRA L. GRIFFIN SONS, INC.

P. O. BOX 10474 CHARLOTTE, N. C.

Phone FRanklin 6-5583